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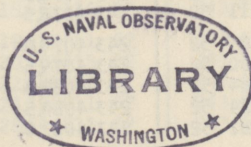
RECTANGULAR COORDINATES OF THE MOON 1952-1971

by

R. L. Duncombe, A. Thomas, and J. S. Duncombe

The rectangular geocentric equatorial coordinates in this *Circular* provide the geometric position of the Moon, in units of the Earth's radius, referred to the mean equinox of the nearest beginning of year. These coordinates are derived from the Improved Lunar Ephemeris, which is assumed to represent Brown's Theory to one hundredth of a second of arc and to represent observations of the Moon to a few tenths of a second of arc. The end figures are therefore liable to errors of 3 or 4 units and are retained only for computational consistency.

Commencing with the apparent longitude, latitude, and horizontal parallax at one-half day intervals, the coordinates were derived by applying precession to the nearest beginning of year, removing the effect of nutation in longitude and antedating for light-time. The reciprocal of sine parallax was taken for the distance in earth radii.



RECTANGULAR COORDINATES OF THE MOON 1952-1971

J.D.	x	y	z	J.D.	x	y	z		
Epoch 1952.0									
243 4012.5	+48,941852	-27,202324	-12,104814	52	243 4046.5	+33,335560	+45,688843	+26,034779	52
243 4013.0	+52,649872	-21,779652	-9,048103	52	243 4047.0	+27,706410	+48,927966	+27,473397	52
243 4013.5	+55,560614	-16,033057	-5,856904	52	243 4047.5	+21,743878	+51,587600	+28,586232	52
243 4014.0	+57,648231	-10,053883	-2,581069	52	243 4048.0	+15,521404	+53,644929	+29,364832	52
243 4014.5	+58,900941	-3,932988	+0,730468	52	243 4048.5	+9,113238	+55,083556	+29,804225	52
243 4015.0	+59,320018	+2,240825	+4,030482	52	243 4049.0	+2,593927	+55,893262	+29,902741	52
243 4015.5	+58,918476	+8,382126	+7,274095	52	243 4049.5	-3,962073	+56,069989	+29,662004	52
243 4016.0	+57,719835	+14,409818	+10,419229	52	243 4050.0	-10,480819	+55,615734	+29,086830	52
243 4016.5	+55,756883	+20,247868	+13,426944	52	243 4050.5	-16,889321	+54,538362	+28,185131	52
243 4017.0	+53,070384	+25,825777	+16,261627	52	243 4051.0	-23,115975	+52,851703	+26,967931	52
243 4017.5	+49,708099	+31,078943	+18,891142	52	243 4051.5	-29,091013	+50,575376	+25,449245	52
243 4018.0	+45,723712	+35,948863	+21,286877	52	243 4052.0	-34,747000	+47,734717	+23,646029	52
243 4018.5	+41,175955	+40,383249	+23,423779	52	243 4052.5	-40,019348	+44,360743	+21,578118	52
243 4019.0	+36,127803	+44,336096	+25,280350	52	243 4053.0	-44,846860	+40,489982	+19,268122	52
243 4019.5	+30,645766	+47,767733	+26,838636	52	243 4053.5	-49,172295	+36,164309	+16,741289	52
243 4020.0	+24,799193	+50,644817	+28,084202	52	243 4054.0	-52,942953	+31,430737	+14,025395	52
243 4020.5	+18,659707	+52,940383	+29,006118	52	243 4054.5	-56,111231	+26,341127	+11,150530	52
243 4021.0	+12,300547	+54,633809	+29,596915	52	243 4055.0	-58,635173	+20,951856	+8,148906	52
243 4021.5	+5,796032	+55,710793	+29,852562	52	243 4055.5	-60,479091	+15,323453	+5,054635	52
243 4022.0	-0,779020	+56,163354	+29,772417	52	243 4056.0	-61,614049	+9,520151	+1,903456	52
243 4022.5	-7,349847	+55,989779	+29,359191	52	243 4056.5	-62,018339	+3,609386	-1,267557	52
243 4023.0	-13,842309	+55,194596	+28,618885	52	243 4057.0	-61,678082	-2,338742	-4,420307	52
243 4023.5	-20,183441	+53,788393	+27,560695	52	243 4057.5	-60,587495	-8,252086	-7,516022	52
243 4024.0	-26,302022	+51,787850	+26,196975	52	243 4058.0	-58,749333	-14,057068	-10,515611	52
243 4024.5	-32,129100	+49,215460	+24,543074	52	243 4058.5	-56,175303	-19,679415	-13,380061	52
243 4025.0	-37,598535	+46,099434	+22,617255	52	243 4059.0	-52,886311	-25,044886	-16,070862	52
243 4025.5	-42,647536	+42,473481	+20,440569	52	243 4059.5	-48,912712	-30,080108	-18,550449	52
243 4026.0	-47,217144	+38,376553	+18,036670	52	243 4060.0	-44,294502	-34,713456	-20,782683	52
243 4026.5	-51,252702	+33,852618	+15,431674	52	243 4060.5	-39,081470	-38,876056	-22,733406	52
243 4027.0	-54,704364	+28,950377	+12,654003	52	243 4061.0	-33,333215	-42,502863	-24,371002	52
243 4027.5	-57,527507	+23,722973	+9,734186	52	243 4061.5	-27,118977	-45,533823	-25,667012	52
243 4028.0	-59,683152	+18,227684	+6,704676	52	243 4062.0	-20,517339	-47,915118	-26,596789	52
243 4028.5	-61,138474	+12,525630	+3,599679	52	243 4062.5	-13,615723	-49,600533	-27,140193	52
243 4029.0	-61,867254	+6,681422	+0,454942	52	243 4063.0	-6,509566	-50,552905	-27,282321	52
243 4029.5	-61,850233	+0,762796	-2,692474	52	243 4063.5	+0,698863	-50,745408	-27,014143	52
243 4030.0	-61,075703	+5,159765	-5,804407	52	243 4064.0	+7,901935	-50,163009	-26,333179	52
243 4030.5	-59,540055	-11,013478	-8,841877	52	243 4064.5	+14,988606	-48,803545	-25,244001	52
243 4031.0	-57,248178	-16,723758	-11,765364	52	243 4065.0	+21,846684	-46,678709	-23,758620	52
243 4031.5	-54,214191	-22,214845	-14,535183	52	243 4065.5	+28,365425	-43,814518	-21,896618	52
243 4032.0	-50,461999	-27,410533	-17,111904	52	243 4066.0	+34,438378	-40,251452	-19,685061	52
243 4032.5	-46,025805	-32,235053	-19,456838	52	243 4066.5	+39,966227	-36,043874	-17,158048	52
243 4033.0	-40,950669	-36,614135	-21,532650	52	243 4067.0	+44,859634	-31,259019	-14,356025	52
243 4033.5	-35,292884	-40,476275	-23,304034	52	243 4067.5	+49,041654	-25,975314	-11,324769	52
243 4034.0	-29,120193	-43,754221	-24,738538	52	243 4068.0	+52,449734	-20,280261	-8,114146	52
243 4034.5	-22,511703	-46,386654	-25,807433	52	243 4068.5	+55,037201	-14,267998	-4,776743	52
243 4035.0	-15,557440	-48,320008	-26,486681	52	243 4069.0	+56,773820	-8,036605	-1,366399	52
243 4035.5	-8,357414	-49,510403	-26,757909	52	243 4069.5	+57,645894	-1,685475	+2,063197	52
243 4036.0	-1,020215	-49,925591	-26,609376	52	243 4070.0	+57,655613	+4,687175	+5,459813	52
243 4036.5	+6,339056	-49,546687	-26,036797	52	243 4070.5	+56,819849	+10,986515	+8,773771	52
243 4037.0	+13,601333	-48,369641	-25,043993	52	243 4071.0	+55,168663	+17,122877	+11,958831	52
243 4037.5	+20,646627	-46,406162	-23,643236	52	243 4071.5	+52,743516	+23,013141	+14,972835	52
243 4038.0	+27,357376	-43,684131	-21,855292	52	243 4072.0	+49,595484	+28,581734	+17,778141	52
243 4038.5	+33,621873	-40,247185	-19,709031	52	243 4072.5	+45,783325	+33,761136	+20,341808	52
243 4039.0	+39,337569	-36,153665	-17,240701	52	243 4073.0	+41,371912	+38,492206	+22,635669	52
243 4039.5	+44,413946	-31,474829	-14,492826	52	243 4073.5	+36,430642	+42,724144	+24,636241	52
243 4040.0	+48,774799	-26,292527	-11,512854	52	243 4074.0	+31,032193	+46,414359	+26,324601	52
243 4040.5	+52,359805	-20,696561	-8,351687	52	243 4074.5	+25,251386	+49,528141	+27,686123	52
243 4041.0	+55,125245	-14,781859	-5,062106	52	243 4075.0	+19,164284	+52,038301	+28,710260	52
243 4041.5	+57,044030	-8,645721	-1,697332	52	243 4075.5	+12,847522	+53,924866	+29,390352	52
243 4042.0	+58,105021	-2,385312	+1,690287	52	243 4076.0	+6,377653	+55,174638	+29,723335	52
243 4042.5	+58,311968	+3,904494	+5,050379	52	243 4076.5	-0,169271	+55,780912	+29,709582	52
243 4043.0	+57,682011	+10,132893	+8,335412	52	243 4077.0	-6,718096	+55,743158	+29,352711	52
243 4043.5	+56,243986	+16,214470	+11,501311	52	243 4077.5	-13,194904	+55,066836	+28,659474	52
243 4044.0	+54,036816	+22,070144	+14,507889	52	243 4078.0	-19,527320	+53,763190	+27,639612	52
243 4044.5	+51,107814	+27,627745	+17,319060	52	243 4078.5	-25,644819	+51,849123	+26,305795	52
243 4045.0	+47,511251	+32,822358	+19,902964	52	243 4079.0	-31,479066	+49,347111	+24,673538	52
243 4045.5	+43,306951	+37,596409	+22,231924	52	243 4079.5	-36,964277	+46,285135	+22,761164	52
243 4046.0	+38,559160	+41,899605	+24,282381	52	243 4080.0	-42,037631	+42,696614	+20,589738	52
					243 4080.5	-46,639747	+38,620345	+18,182997	52
					243 4081.0	-50,715215	+34,100433	+15,567307	52

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z	J.D.	x	y	z		
243 4081.5	-54,213156	+29,186118	+12,771527	52	243 4116.5	-20,244606	-48,297857	-26,530857	52
243 4082.0	-57,087854	+23,931612	+ 9,826882	52	243 4117.0	-13,394128	-50,119213	-27,136320	52
243 4082.5	-59,299425	+18,395817	+ 6,766801	52	243 4117.5	- 6,356484	-51,216062	-27,349193	52
243 4083.0	-60,814444	+12,641968	+ 3,626667	52	243 4118.0	+ 0,767977	-51,566774	-27,163383	52
243 4083.5	-61,606725	+ 6,737192	+ 0,443571	52	243 4118.5	+ 7,876249	-51,161185	-26,578992	52
243 4084.0	-61,657815	+ 0,751921	- 2,744055	52	243 4119.0	+14,864445	-50,000889	-25,602388	52
243 4084.5	-60,957723	- 5,240743	- 5,896794	52	243 4119.5	+21,629636	-48,099412	-24,246192	52
243 4085.0	-59,505347	-11,165812	- 8,974689	52	243 4120.0	+28,071678	-45,482119	-22,529135	52
243 4085.5	-57,308967	-16,947242	-11,937719	52	243 4120.5	+34,095004	-42,185852	-20,475765	52
243 4086.0	-54,386541	-22,508894	-14,746316	52	243 4121.0	+39,610357	-38,258374	-18,116066	52
243 4086.5	-50,765944	-27,775550	-17,361923	52	243 4121.5	+44,536472	-33,757639	-15,484969	52
243 4087.0	-46,484908	-32,673915	-19,747518	52	243 4122.0	+48,801499	-28,750695	-12,621719	52
243 4087.5	-41,591043	-37,133769	-21,868236	52	243 4122.5	+52,344399	-23,312561	- 9,569183	52
243 4088.0	-36,141520	-41,089035	-23,691917	52	243 4123.0	+55,116030	-17,524811	- 6,373054	52
243 4088.5	-30,202703	-44,478943	-25,189691	52	243 4123.5	+57,079995	-11,474007	- 3,080979	52
243 4089.0	-23,849540	-47,249052	-26,336520	52	243 4124.0	+58,213189	- 5,250052	+ 0,258349	52
243 4089.5	-17,164872	-49,352454	-27,111767	52	243 4124.5	+58,506131	+ 1,055543	+ 3,596116	52
243 4090.0	-10,238495	-50,750723	-27,499678	52	243 4125.0	+57,962760	+ 7,351423	+ 6,884313	52
243 4090.5	- 3,166080	-51,414988	-27,489879	52	243 4125.5	+56,600102	+13,548096	+10,076622	52
243 4091.0	+ 3,952127	-51,326748	-27,077754	52	243 4126.0	+54,447523	+19,559537	+13,129212	52
243 4091.5	+11,012783	-50,478784	-26,264838	52	243 4126.5	+51,545706	+25,304627	+16,001462	52
243 4092.0	+17,911105	-48,875669	-25,059014	52	243 4127.0	+47,945429	+30,708390	+18,656537	52
243 4092.5	+24,542775	-46,534347	-23,474712	52	243 4127.5	+43,706146	+35,702982	+21,061830	52
243 4093.0	+30,805904	-43,484226	-21,532861	52	243 4128.0	+38,894514	+40,228406	+23,189274	52
243 4093.5	+36,603224	-39,767169	-19,260761	52	243 4128.5	+33,582918	+44,233032	+25,015531	52
243 4094.0	+41,844200	-35,436952	-16,691704	52	243 4129.0	+27,847932	+47,673774	+26,522001	52
243 4094.5	+46,447181	-30,558515	-13,864431	52	243 4129.5	+21,768973	+50,516128	+27,694766	52
243 4095.0	+50,341421	-25,206765	-10,822423	52	243 4130.0	+15,427068	+52,734041	+28,524471	52
243 4095.5	+53,468750	-19,464972	- 7,612945	52	243 4130.5	+ 8,903719	+54,309600	+29,006081	52
243 4096.0	+55,784895	-13,422907	- 4,285984	52	243 4131.0	+ 2,279985	+55,232626	+29,138624	52
243 4096.5	+57,260467	- 7,174757	- 0,893106	52	243 4131.5	- 4,364286	+55,500301	+28,924956	52
243 4097.0	+57,881362	- 0,816890	+ 2,513771	52	243 4132.0	-10,951103	+55,116658	+28,371448	52
243 4097.5	+57,648520	+ 5,554402	+ 5,883549	52	243 4132.5	-17,404801	+54,092149	+27,487737	52
243 4098.0	+56,577420	+11,845011	+ 9,167054	52	243 4133.0	-23,652452	+52,443239	+26,286485	52
243 4098.5	+54,696994	+17,964943	+12,317998	52	243 4133.5	-29,624163	+50,192059	+24,783179	52
243 4099.0	+52,048150	+23,829916	+15,293757	52	243 4134.0	-35,253328	+47,366076	+22,995945	52
243 4099.5	+48,682281	+29,362662	+18,055983	52	243 4134.5	-40,476869	+43,997848	+20,945400	52
243 4100.0	+44,659408	+34,493820	+20,570983	52	243 4135.0	-45,235417	+40,124802	+18,654524	52
243 4100.5	+40,046479	+39,162509	+22,809932	52	243 4135.5	-49,473643	+35,789166	+16,148605	52
243 4101.0	+34,915710	+43,316604	+24,748934	52	243 4136.0	-53,140492	+31,037790	+13,455133	52
243 4101.5	+29,343049	+46,912756	+26,368956	52	243 4136.5	-56,189544	+25,922092	+10,603732	52
243 4102.0	+23,406805	+49,916168	+27,655633	52	243 4137.0	-58,579487	+20,497966	+ 7,626112	52
243 4102.5	+17,186524	+52,300306	+28,599054	52	243 4137.5	-60,274622	+14,825696	+ 4,555964	52
243 4103.0	+10,762035	+54,046457	+29,193487	52	243 4138.0	-61,245434	+ 8,969755	+1,428850	52
243 4103.5	+ 4,212671	+55,143299	+29,437094	52	243 4138.5	-61,469336	+ 2,998615	- 1,717963	52
243 4104.0	- 2,383317	+55,586454	+29,331671	52	243 4139.0	-60,931476	- 3,015630	- 4,845739	52
243 4104.5	- 8,949240	+55,378107	+28,882421	52	243 4139.5	-59,625416	- 8,997761	- 7,914563	52
243 4105.0	-15,410344	+54,526511	+28,097664	52	243 4140.0	-57,554075	-14,870098	-10,883759	52
243 4105.5	-21,694109	+53,045821	+26,988733	52	243 4140.5	-54,730467	-20,553356	-13,712366	52
243 4106.0	-27,730481	+50,955721	+25,569775	52	243 4141.0	-51,178395	-25,967719	-16,359761	52
243 4106.5	-33,452174	+48,281352	+23,857671	52	243 4141.5	-46,932964	-31,034107	-18,786338	52
243 4107.0	-38,794849	+45,053032	+21,871896	52	243 4142.0	-42,040929	-35,675673	-20,954309	52
243 4107.5	-43,697475	+41,306280	+19,634507	52	243 4142.5	-36,560628	-39,819351	-22,828537	52
243 4108.0	-48,102649	+37,081687	+17,170053	52	243 4143.0	-30,561685	-43,397618	-24,377419	52
243 4108.5	-51,957014	+32,424882	+14,505531	52	243 4143.5	-24,124229	-46,350145	-25,573720	52
243 4109.0	-55,211707	+27,386429	+11,670317	52	243 4144.0	-17,337807	-48,625510	-26,395411	52
243 4109.5	-57,823019	+22,021771	+ 8,696091	52	243 4144.5	-10,299802	-50,182588	-26,826315	52
243 4110.0	-59,752899	+16,391013	+ 5,616695	52	243 4145.0	- 3,113626	-50,991800	-26,856653	52
243 4110.5	-60,969801	+10,558719	+ 2,467979	52	243 4145.5	+ 4,113375	-51,036054	-26,483428	52
243 4111.0	-61,449270	+ 4,593501	- 0,712436	52	243 4146.0	+11,272198	-50,311234	-25,710556	52
243 4111.5	-61,174885	- 1,432430	- 3,885464	52	243 4146.5	+18,254466	-48,826386	-24,548828	52
243 4112.0	-60,138900	- 7,443915	- 7,010918	52	243 4147.0	+24,954714	-46,603501	-23,015674	52
243 4112.5	-58,342937	-13,363636	-10,047980	52	243 4147.5	+31,272508	-43,676940	-21,134739	52
243 4113.0	-55,798677	-19,113068	-12,955724	52	243 4148.0	+37,114369	-40,092547	-18,935316	52
243 4113.5	-52,528308	-24,613592	-15,693735	52	243 4148.5	+42,395474	-35,906572	-16,451676	52
243 4114.0	-48,564759	-29,787685	-18,222761	52	243 4149.0	+47,041029	-31,184333	-13,722288	52
243 4114.5	-43,951832	-34,560288	-20,505435	52	243 4149.5	+50,987342	-25,998780	-10,789011	52
243 4115.0	-38,744001	-38,860172	-22,506977	52	243 4150.0	+54,182679	-20,429010	- 7,696260	52
243 4115.5	-33,005957	-42,621345	-24,195931	52	243 4150.5	+56,587764	-14,558699	- 4,490151	52
243 4116.0	-26,811906	-45,784404	-25,544833	52	243 4151.0	+58,176012	- 8,474560	- 1,217691	52

RECTANGULAR COORDINATES OF THE MOON 1952-1971

J.D.	x	y	z		J.D.	x	y	z	
243 4151,5	+58,933609	- 2,264831	+ 2,074046	52	243 4186,5	- 9,356950	+55,547327	+28,354941	52
243 4152,0	+58,859281	+ 3,982187	+ 5,338647	52	243 4187,0	-15,878897	+54,668617	+27,497931	52
243 4152,5	+57,963860	+10,179533	+ 8,531093	52	243 4187,5	-22,218044	+53,170707	+26,328629	52
243 4153,0	+56,269805	+16,242875	+11,608400	52	243 4188,0	-28,302896	+51,074462	+24,862329	52
243 4153,5	+53,810296	+22,091709	+14,530204	52	243 4188,5	-34,065361	+48,406506	+23,117124	52
243 4154,0	+50,628446	+27,650419	+17,259277	52	243 4189,0	-39,441186	+45,198874	+21,113710	52
243 4154,5	+46,776244	+32,849228	+19,761951	52	243 4189,5	-44,370328	+41,488630	+18,875172	52
243 4155,0	+42,313441	+37,624967	+22,008475	52	243 4190,0	-48,797235	+37,317495	+16,426754	52
243 4155,5	+37,306320	+41,921679	+23,973261	52	243 4190,5	-52,671181	+32,731549	+13,795686	52
243 4156,0	+31,826536	+45,691103	+25,635063	52	243 4191,0	-55,946454	+27,780900	+11,011005	52
243 4156,5	+25,949845	+48,892928	+26,977050	52	243 4191,5	-58,582730	+22,519461	+ 8,103406	52
243 4157,0	+19,754920	+51,494939	+27,986805	52	243 4192,0	-60,545212	+17,004636	+ 5,105072	52
243 4157,5	+13,322224	+53,473013	+28,656275	52	243 4192,5	-61,805010	+11,297130	+ 2,049543	52
243 4158,0	+ 6,732926	+54,810911	+28,981581	52	243 4193,0	-62,339505	+ 5,460704	- 1,028416	52
243 4158,5	+ 0,067979	+55,500173	+28,962920	52	243 4193,5	-62,132607	- 0,438075	- 4,092992	52
243 4159,0	- 6,592748	+55,539604	+28,604255	52	243 4194,0	-61,175400	- 6,330085	- 7,107472	52
243 4159,5	-13,171188	+54,935045	+27,913128	52	243 4194,5	-59,466468	-12,143986	-10,034451	52
243 4160,0	-19,591683	+53,698918	+26,900421	52	243 4195,0	-57,012664	-17,806629	-12,836104	52
243 4160,5	-25,781493	+51,849781	+25,580054	52	243 4195,5	-53,829636	-23,243586	-15,474485	52
243 4161,0	-31,671207	+49,411943	+23,968789	52	243 4196,0	-49,942513	-28,379834	-17,911929	52
243 4161,5	-37,195100	+46,415133	+22,086022	52	243 4196,5	-45,386605	-33,140646	-20,111573	52
243 4162,0	-42,291361	+42,894060	+19,953536	52	243 4197,0	-40,207897	-37,452615	-22,037920	52
243 4162,5	-46,902416	+38,888219	+17,595387	52	243 4197,5	-34,635595	-41,245059	-23,657595	52
243 4163,0	-50,975093	+34,441582	+15,037721	52	243 4198,0	-28,222261	-44,451477	-24,940133	52
243 4163,5	-54,460902	+29,602423	+12,308669	52	243 4198,5	-21,563741	-47,011361	-25,858908	52
243 4164,0	-57,316315	+24,423126	+ 9,438232	52	Epoch 1953.0				
243 4164,5	-59,502998	+18,960039	+ 6,458183	52	243 4190,0	-48,807170	+37,306587	+16,422012	53
243 4165,0	-60,988322	+13,273369	+ 3,401985	52	243 4190,5	-52,679836	+32,719776	+13,790568	53
243 4165,5	-61,745752	+ 7,427008	+ 0,304664	52	243 4191,0	-55,953732	+27,768394	+11,005568	53
243 4166,0	-61,755423	+ 1,488348	- 2,797305	52	243 4191,5	-58,588549	+22,506366	+ 8,097714	53
243 4166,5	-61,004700	- 4,471973	- 5,866188	52	243 4192,0	-60,549507	+16,991103	+ 5,099188	53
243 4167,0	-59,489028	-10,380429	- 8,863218	52	243 4192,5	-61,807732	+11,283315	+ 2,043537	53
243 4167,5	-57,212551	-16,161115	-11,748892	52	243 4193,0	-62,340623	+ 5,446770	- 1,034473	53
243 4168,0	-54,189047	-21,736412	-14,483397	52	243 4193,5	-62,132109	- 0,451962	- 4,099029	53
243 4168,5	-50,442598	-27,027866	-17,027094	52	243 4194,0	-61,173293	- 6,343758	- 7,113417	53
243 4169,0	-46,008342	-31,957289	-19,341141	52	243 4194,5	-59,462777	-12,157277	-10,040229	53
243 4169,5	-40,933026	-36,448116	-21,388246	52	243 4195,0	-57,007435	-17,819371	-12,841643	53
243 4170,0	-35,275282	-40,426988	-23,133495	52	243 4195,5	-53,822936	-23,255616	-15,479715	53
243 4170,5	-29,105583	-43,825477	-24,545266	52	243 4196,0	-49,934428	-28,390996	-17,916782	53
243 4171,0	-22,505811	-46,582029	-25,596213	52	243 4196,5	-45,377242	-33,150789	-20,115982	53
243 4171,5	-15,568345	-48,643917	-26,264237	52	243 4197,0	-40,197384	-37,461600	-22,041826	53
243 4172,0	- 8,394568	-49,969013	-26,533319	52	243 4197,5	-34,452077	-41,252760	-23,660943	53
243 4172,5	- 1,092981	-50,527497	-26,394298	52	243 4198,0	-28,209901	-44,457784	-24,942875	53
243 4173,0	+ 6,223188	-50,303153	-25,845419	52	243 4198,5	-21,550721	-47,016179	-25,861002	53
243 4173,5	+13,438666	-49,294176	-24,892587	52	243 4199,0	-14,565160	-48,875323	-26,393509	53
243 4174,0	+20,439014	-47,513546	-23,549387	52	243 4199,5	- 7,353593	-49,992483	-26,524348	53
243 4174,5	+27,113476	-44,988780	-21,836799	52	243 4200,0	- 0,024524	-50,336631	-26,244113	53
243 4175,0	+33,357703	-41,761154	-19,782608	52	243 4200,5	+ 7,307509	-49,890211	-25,550825	53
243 4175,5	+39,076150	-37,884476	-17,420640	52	243 4201,0	+14,524599	-48,650460	-24,450434	53
243 4176,0	+44,184065	-33,423480	-14,789795	52	243 4201,5	+21,508503	-46,630165	-22,957055	53
243 4176,5	+48,608994	-28,451959	-11,932974	52	243 4202,0	+28,143898	-43,857910	-21,092867	53
243 4177,0	+52,291796	-23,050770	- 8,895986	52	243 4202,5	+34,321635	-40,377540	-18,887647	53
243 4177,5	+55,187147	-17,305813	- 5,726456	52	243 4203,0	+39,941778	-36,247028	-16,377969	53
243 4178,0	+57,263669	-11,306086	- 2,472797	52	243 4203,5	+44,916240	-31,536723	-13,606137	53
243 4178,5	+58,503738	- 5,141894	+ 0,816712	52	243 4204,0	+49,170754	-26,327122	-10,618886	53
243 4179,0	+58,902852	+ 1,096811	+ 4,094764	52	243 4204,5	+52,646317	-20,706441	- 7,466029	53
243 4179,5	+58,468983	+ 7,321865	+ 7,315726	52	243 4205,0	+55,299774	-14,768007	- 4,199056	53
243 4180,0	+57,221655	+13,448118	+10,436240	52	243 4205,5	+57,103946	- 8,607789	- 0,869838	53
243 4180,5	+55,191018	+19,394508	+13,415716	52	243 4206,0	+58,047048	- 2,322075	+ 2,470569	53
243 4181,0	+52,416773	+25,084924	+16,216729	52	243 4206,5	+58,131824	+ 3,994539	+ 5,772889	53
243 4181,5	+48,947179	+30,448943	+18,805356	52	243 4207,0	+57,374276	+10,250822	+ 8,990454	53
243 4182,0	+44,837948	+35,422409	+21,151391	52	243 4207,5	+55,802375	+16,360272	+12,079808	53
243 4182,5	+40,151238	+39,947913	+23,228551	52	243 4208,0	+53,454492	+22,242111	+15,001151	53
243 4183,0	+34,954540	+43,975090	+25,014570	52	243 4208,5	+50,378064	+27,822050	+17,718643	53
243 4183,5	+29,319759	+47,460955	+26,491309	52	243 4209,0	+46,628147	+33,032772	+20,200567	53
243 4184,0	+23,322148	+50,370007	+27,644746	52	243 4209,5	+42,266215	+37,814285	+22,419445	53
243 4184,5	+17,039355	+52,674299	+28,464970	52	243 4210,0	+37,358886	+42,114043	+24,352014	53
243 4185,0	+10,550528	+54,353480	+28,946135	52	243 4210,5	+31,976901	+45,887018	+25,979214	53
243 4185,5	+ 3,935380	+55,394604	+29,086311	52	243 4211,0	+26,194151	+49,095702	+27,286108	53
243 4186,0	- 2,726603	+55,792065	+28,887397	52					

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z	J.D.	x	y	z		
243 4211,5	+20,086813	+51,710032	+28,261806	53	243 4246,5	-60,784008	+17,228601	+5,067670	53
243 4212,0	+13,732528	+53,707297	+28,899354	53	243 4247,0	-62,147453	+11,528985	+2,000912	53
243 4212,5	+7,209657	+55,071963	+29,195607	53	243 4247,5	-62,804918	+5,702417	-1,086298	53
243 4213,0	+0,596596	+55,795576	+29,151120	53	243 4248,0	-62,742673	+0,184733	-4,158384	53
243 4213,5	-6,028884	+55,876541	+28,770007	53	243 4248,5	-61,954216	-6,064368	-7,179341	53
243 4214,0	-12,590265	+55,319929	+28,059784	53	243 4249,0	-60,440638	-11,867169	-10,113032	53
243 4214,5	-19,012853	+54,137256	+27,031235	53	243 4249,5	-58,210789	-17,523139	-12,923464	53
243 4215,0	-25,224355	+52,346243	+25,698231	53	243 4250,0	-55,281541	-22,962199	-15,575131	53
243 4215,5	-31,155381	+49,970506	+24,077551	53	243 4250,5	-51,677987	-28,114779	-18,033329	53
243 4216,0	-36,739972	+47,039322	+22,188709	53	243 4251,0	-47,433610	-32,912507	-20,264526	53
243 4216,5	-41,916026	+43,587262	+20,053758	53	243 4251,5	-42,590430	-37,288902	-22,236735	53
243 4217,0	-46,625760	+39,653905	+17,697090	53	243 4252,0	-37,199177	-41,180220	-23,919974	53
243 4217,5	-50,816084	+35,283466	+15,145226	53	243 4252,5	-31,319263	-44,526316	-25,286701	53
243 4218,0	-54,438967	+30,524437	+12,426607	53	243 4253,0	-25,018796	-47,271655	-26,312353	53
243 4218,5	-57,451768	+25,429243	+9,571386	53	243 4253,5	-18,374365	-49,366398	-26,975890	53
243 4219,0	-59,817497	+20,053863	+6,611223	53	243 4254,0	-11,470723	-50,767652	-27,260441	53
243 4219,5	-61,505130	+14,457507	+3,579079	53	243 4254,5	-4,400152	-51,440692	-27,153885	53
243 4220,0	-62,489960	+8,702270	+0,509018	53	243 4255,0	+2,738380	-51,360434	-26,649569	53
243 4220,5	-62,753765	+2,852759	-2,563993	53	243 4255,5	+9,840493	-50,512656	-25,746865	53
243 4221,0	-62,285173	-3,024249	-5,604294	53	243 4256,0	+16,798008	-48,895374	-24,451784	53
243 4221,5	-61,080046	-8,860179	-8,575751	53	243 4256,5	+23,500971	-46,519865	-22,777373	53
243 4222,0	-59,141695	-14,585066	-11,441979	53	243 4257,0	+29,840097	-43,411551	-20,744018	53
243 4222,5	-56,481379	-20,128010	-14,166616	53	243 4257,5	+35,709471	-39,610277	-18,379412	53
243 4223,0	-53,118633	-25,417665	-16,713603	53	243 4258,0	+41,009541	-35,170261	-15,718341	53
243 4223,5	-49,081715	-30,382862	-19,047533	53	243 4258,5	+45,649992	-30,159240	-12,802041	53
243 4224,0	-44,408090	-34,953358	-21,134079	53	243 4259,0	+49,552637	-24,657177	-9,677338	53
243 4224,5	-39,144762	-39,060663	-22,940453	53	243 4259,5	+52,653734	-18,754209	-6,395433	53
243 4225,0	-33,348625	-42,639105	-24,435978	53	243 4260,0	+54,905875	-12,548212	-3,010495	53
243 4225,5	-27,086705	-45,627089	-25,592768	53	243 4260,5	+56,279027	-6,141978	+0,421868	53
243 4226,0	-20,436071	-47,968409	-26,386408	53	243 4261,0	+56,760955	+0,359683	+3,846148	53
243 4226,5	-13,483637	-49,613942	-26,796823	53	243 4261,5	+56,356719	+6,852813	+7,208426	53
243 4227,0	-6,325446	-50,523252	-26,809076	53	243 4262,0	+55,087659	+13,236913	+10,457636	53
243 4227,5	+0,934389	-50,666454	-26,414262	53	243 4262,5	+52,989729	+19,417136	+13,546625	53
243 4228,0	+8,185327	-50,025817	-25,610269	53	243 4263,0	+50,111585	+25,306054	+16,432945	53
243 4228,5	+15,312508	-48,597354	-24,402428	53	243 4263,5	+46,512377	+30,824880	+19,079344	53
243 4229,0	+22,199409	-46,392009	-22,804008	53	243 4264,0	+42,259671	+35,904280	+21,454048	53
243 4229,5	+28,730864	-43,436270	-20,836308	53	243 4264,5	+37,427340	+40,484711	+23,530816	53
243 4230,0	+34,796377	-39,772357	-18,528547	53	243 4265,0	+32,093680	+44,516412	+25,288797	53
243 4230,5	+40,293402	-35,457472	-15,917272	53	243 4265,5	+26,339838	+47,959228	+26,712337	53
243 4231,0	+45,130443	-30,562504	-13,045470	53	243 4266,0	+20,248425	+50,782175	+27,790677	53
243 4231,5	+49,229787	-25,170069	-9,961364	53	243 4266,5	+13,902362	+52,962888	+28,517564	53
243 4232,0	+52,529399	-19,371939	-6,716954	53	243 4267,0	+7,384061	+54,487228	+28,891017	53
243 4232,5	+54,984319	-13,266302	-3,366493	53	243 4267,5	+0,774639	+55,348541	+28,912873	53
243 4233,0	+56,567006	-6,954795	+0,035095	53	243 4268,0	-5,846577	+55,547333	+28,588590	53
243 4233,5	+57,267195	-0,539716	+3,433656	53	243 4268,5	-12,402525	+55,090656	+27,926894	53
243 4234,0	+57,090811	+5,878548	+6,777083	53	243 4269,0	-18,818744	+53,991814	+26,939604	53
243 4234,5	+56,058688	+12,203675	+10,016371	53	243 4269,5	-25,023692	+52,269902	+25,641360	53
243 4235,0	+54,204815	+18,345144	+13,106393	53	243 4270,0	-30,949030	+49,949612	+24,049514	53
243 4235,5	+51,574424	+24,219518	+16,006453	53	243 4270,5	-36,529880	+47,060866	+22,183915	53
243 4236,0	+48,222132	+29,751291	+18,680616	53	243 4271,0	-41,705172	+43,638701	+20,066818	53
243 4236,5	+44,210080	+34,873368	+21,097831	53	243 4271,5	-46,417877	+39,722922	+17,722707	53
243 4237,0	+39,606349	+39,527305	+23,231950	53	243 4272,0	-50,615468	+35,358036	+15,178205	53
243 4237,5	+34,483411	+43,663260	+25,061615	53	243 4272,5	-54,250209	+30,592922	+12,461908	53
243 4238,0	+28,916904	+47,239847	+26,570094	53	243 4273,0	-57,279575	+25,480611	+9,604219	53
243 4238,5	+22,984520	+50,223837	+27,745055	53	243 4273,5	-59,666717	+20,078025	+6,637190	53
243 4239,0	+16,765117	+52,589912	+28,578383	53	243 4274,0	-61,380862	+14,445612	+3,594313	53
243 4239,5	+10,337898	+54,320206	+29,065878	53	243 4274,5	-62,397795	+8,646971	+0,510280	53
243 4240,0	+3,781824	+55,404149	+29,207146	53	243 4275,0	-62,700261	+2,748391	-2,579277	53
243 4240,5	-2,825007	+55,837981	+29,005298	53	243 4275,5	-62,278353	+3,181665	-5,638076	53
243 4241,0	-9,405835	+55,624558	+28,466817	53	243 4276,0	-61,129934	-9,073135	-8,629531	53
243 4241,5	-15,885694	+54,773088	+27,601391	53	243 4276,5	-59,260882	-14,855007	-11,517071	53
243 4242,0	-22,191866	+53,298861	+26,421747	53	243 4277,0	-56,685422	-20,456014	-14,264566	53
243 4242,5	-28,254289	+51,222991	+24,943473	53	243 4277,5	-53,426199	-25,805362	-16,836683	53
243 4243,0	-34,005997	+48,572238	+23,184921	53	243 4278,0	-49,514531	-30,833582	-19,199344	53
243 4243,5	-39,383504	+45,378707	+21,166994	53	243 4278,5	-44,990223	-35,473269	-21,320116	53
243 4244,0	-44,327292	+41,679659	+18,913051	53	243 4279,0	-39,901675	-39,660027	-23,168691	53
243 4244,5	-48,782151	+37,517197	+16,448686	53	243 4279,5	-34,305605	-43,333320	-24,717324	53
243 4245,0	-52,697665	+32,938013	+13,801585	53	243 4280,0	-28,266779	-46,437370	-25,941261	53
243 4245,5	-56,028579	+27,993032	+11,001308	53	243 4280,5	-21,857647	-48,922112	-26,819234	53
243 4246,0	-58,735260	+22,737107	+8,079106	53	243 4281,0	-15,157809	-50,744125	-27,333896	53

J.D.	x	y	z	J.D.	x	y	z		
243 4281,5	- 8,253366	-51,867583	-27,472277	53	243 4316,5	+56,543208	+ 9,043314	+ 8,362146	53
243 4282,0	- 1,236128	-52,265267	-27,226245	53	243 4317,0	+54,786257	+15,317412	+11,469425	53
243 4282,5	+ 5,797411	-51,919426	-26,592910	53	243 4317,5	+52,222483	+21,370346	+14,408867	53
243 4283,0	+12,747265	-50,822739	-25,575012	53	243 4318,0	+48,898443	+27,115574	+17,139054	53
243 4283,5	+19,511386	-48,979087	-24,181256	53	243 4318,5	+44,872254	+32,473607	+19,622980	53
243 4284,0	+25,987316	-46,404240	-22,426533	53	243 4319,0	+40,211818	+37,373283	+21,828584	53
243 4284,5	+32,074124	-43,126374	-20,332094	53	243 4319,5	+34,993047	+41,752782	+23,729178	53
243 4285,0	+37,674478	-39,186253	-17,925471	53	243 4320,0	+29,297898	+45,560269	+25,303610	53
243 4285,5	+42,696899	-34,637103	-15,240285	53	243 4320,5	+23,212473	+48,754137	+26,536292	53
243 4286,0	+47,058165	-29,544170	-12,315857	53	243 4321,0	+16,825237	+51,302991	+27,417058	53
243 4286,5	+50,685533	-23,983681	- 9,196517	53	243 4321,5	+10,225243	+53,185399	+27,940925	53
243 4287,0	+53,518900	-18,041451	- 5,930743	53	243 4322,0	+ 3,501614	+54,389374	+28,107740	53
243 4287,5	+55,512572	-11,811020	- 2,570074	53	243 4322,5	- 3,259404	+54,911749	+27,921772	53
243 4288,0	+56,636627	- 5,391436	+ 0,832121	53	243 4323,0	- 9,973585	+54,757562	+27,391338	53
243 4288,5	+56,877683	+ 1,115236	+ 4,221993	53	243 4323,5	-16,560309	+53,939229	+26,528326	53
243 4289,0	+56,239049	+ 7,606507	+ 7,546580	53	243 4324,0	-22,942943	+52,475960	+25,347853	53
243 4289,5	+54,740223	+13,982017	+10,755072	53	243 4324,5	-29,049171	+50,393004	+23,867853	53
243 4290,0	+52,415792	+20,145902	+13,799997	53	243 4325,0	-34,811288	+47,721136	+22,108801	53
243 4290,5	+49,313908	+26,008826	+16,638154	53	243 4325,5	-40,166326	+44,496109	+20,093401	53
243 4291,0	+45,494376	+31,489646	+19,231370	53	243 4326,0	-45,056215	+40,758257	+17,846393	53
243 4291,5	+41,026488	+36,516541	+21,546932	53	243 4326,5	-49,427812	+36,552073	+15,394317	53
243 4292,0	+35,986918	+41,027805	+23,557866	53	243 4327,0	-53,233141	+31,926041	+12,765405	53
243 4292,5	+30,457593	+44,972114	+25,242934	53	243 4327,5	-56,429361	+26,932258	+ 9,989399	53
243 4293,0	+24,523788	+48,308551	+26,586520	53	243 4328,0	-58,979098	+21,626352	+ 7,097476	53
243 4293,5	+18,272407	+51,006230	+27,578329	53	243 4328,5	-60,850638	+16,067255	+ 4,122114	53
243 4294,0	+11,790566	+53,043821	+28,213036	53	243 4329,0	-62,018205	+10,317008	+ 1,096973	53
243 4294,5	+ 5,164430	+54,408933	+28,489908	53	243 4329,5	-62,462461	+ 4,440574	- 1,943238	53
243 4295,0	- 1,521697	+55,097454	+28,412371	53	243 4330,0	-62,170815	- 1,494452	- 4,962929	53
243 4295,5	- 8,186067	+55,112792	+27,987602	53	243 4330,5	-61,138025	- 7,418184	- 7,925854	53
243 4296,0	-14,750000	+54,465379	+27,226213	53	243 4331,0	-59,366727	-13,258894	-10,795378	53
243 4296,5	-21,138262	+53,171926	+26,141855	53	243 4331,5	-56,867995	-18,943605	-13,534818	53
243 4297,0	-27,279331	+51,255033	+24,750978	53	243 4332,0	-53,661789	-24,398793	-16,107839	53
243 4297,5	-33,105611	+48,742688	+23,072580	53	243 4332,5	-49,777503	-29,551282	-18,478942	53
243 4298,0	-38,553591	+45,667918	+21,127982	53	243 4333,0	-45,254278	-34,329269	-20,614025	53
243 4298,5	-43,564052	+42,068505	+18,940702	53	243 4333,5	-40,141121	-38,663475	-22,480983	53
243 4299,0	-48,082197	+37,986709	+16,536260	53	243 4334,0	-34,496904	-42,488442	-24,050350	53
243 4299,5	-52,057904	+33,469063	+13,942089	53	243 4334,5	-28,390055	-45,743884	-25,295995	53
243 4300,0	-55,446007	+28,566226	+11,187417	53	243 4335,0	-21,897944	-48,376055	-26,195770	53
243 4300,5	-58,206571	+23,332737	+ 8,303133	53	243 4335,5	-15,106041	-50,339164	-26,732167	53
243 4301,0	-60,305329	+17,826858	+ 5,321662	53	243 4336,0	- 8,106682	-51,596548	-26,892849	53
243 4301,5	-61,714062	+12,110295	+ 2,276808	53	243 4336,5	- 0,997639	-52,121785	-26,671112	53
243 4302,0	-62,411059	+ 6,247893	- 0,796452	53	243 4337,0	+ 6,119568	-51,899627	-26,066241	53
243 4302,5	-62,381653	+ 0,307277	- 3,862168	53	243 4337,5	+13,141531	-50,926557	-25,083671	53
243 4303,0	-61,618705	- 5,641638	- 6,883730	53	243 4338,0	+19,964899	-49,211106	-23,735008	53
243 4303,5	-60,123058	-11,527217	- 9,824169	53	243 4338,5	+26,488370	-46,773945	-22,037937	53
243 4304,0	-57,904041	-17,276777	-12,646558	53	243 4339,0	+32,614613	-43,647546	-20,015916	53
243 4304,5	-54,979793	-22,817384	-15,314426	53	243 4339,5	+38,252143	-39,875696	-17,697794	53
243 4305,0	-51,377558	-28,076727	-17,792246	53	243 4340,0	+43,316990	-35,512683	-15,117260	53
243 4305,5	-47,133812	-32,984090	-20,045943	53	243 4340,5	+47,734239	-30,622289	-12,312250	53
243 4306,0	-42,294284	-37,471417	-22,043429	53	243 4341,0	+51,439321	-25,276618	- 9,324222	53
243 4306,5	-36,913762	-41,474383	-23,755166	53	243 4341,5	+54,379081	-19,554769	- 6,197418	53
243 4307,0	-31,055714	-44,933486	-25,154686	53	243 4342,0	+56,512622	-13,541396	- 2,978058	53
243 4307,5	-24,791790	-47,795181	-26,219144	53	243 4342,5	+57,811938	- 7,325207	+ 0,286465	53
243 4308,0	-18,201034	-50,012871	-26,929795	53	243 4343,0	+58,262175	+ 0,997360	+ 3,548431	53
243 4308,5	-11,369033	-51,547973	-27,272455	53	243 4343,5	+57,861822	+ 5,350087	+ 6,760604	53
243 4309,0	- 4,386808	-52,370741	-27,237874	53	243 4344,0	+56,622531	+11,625815	+ 9,877065	53
243 4309,5	+ 2,650390	-52,461087	-26,822077	53	243 4344,5	+54,568634	+17,740767	+12,853938	53
243 4310,0	+ 9,644419	-51,809238	-26,026600	53	243 4345,0	+51,736623	+23,609667	+15,650159	53
243 4310,5	+16,495725	-50,416234	-24,858654	53	243 4345,5	+48,174137	+29,152379	+18,228081	53
243 4311,0	+23,104883	-48,294264	-23,331190	53	243 4346,0	+43,938943	+34,295175	+20,554061	53
243 4311,5	+29,374267	-45,466912	-21,462917	53	243 4346,5	+39,097612	+38,971793	+22,598906	53
243 4312,0	+35,209705	-41,969019	-19,278114	53	243 4347,0	+33,724105	+43,124317	+24,338215	53
243 4312,5	+40,522258	-37,846563	-16,806444	53	243 4347,5	+27,898254	+46,703807	+25,752610	53
243 4313,0	+45,229913	-33,156117	-14,082572	53	243 4348,0	+21,704168	+49,670671	+26,827803	53
243 4313,5	+49,259318	-27,964186	-11,145693	53	243 4348,5	+15,228762	+51,994930	+27,554631	53
243 4314,0	+52,547383	-22,346228	- 8,038925	53	243 4349,0	+ 8,560193	+53,656050	+27,928863	53
243 4314,5	+55,042761	-16,385408	- 4,808562	53	243 4349,5	+ 1,786554	+54,642790	+27,951020	53
243 4315,0	+56,707081	-10,171096	- 1,503222	53	243 4350,0	- 5,005383	+54,952755	+27,626065	53
243 4315,5	+57,515986	- 3,797159	+ 1,827103	53	243 4350,5	-11,731210	+54,591839	+26,963052	53
243 4316,0	+57,459667	+ 2,639972	+ 5,132093	53	243 4351,0	-18,309775	+53,573719	+25,974771	53

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z	J.D.	x	y	z		
243 4351,5	-24,663868	+51,919063	+24,677334	53	243 4386,5	-56,034662	-21,755088	-15,337550	53
243 4352,0	-30,720794	+49,654947	+23,089807	53	243 4387,0	-52,531297	-26,960368	-17,725191	53
243 4352,5	-36,412760	+46,814230	+21,233868	53	243 4387,5	-48,372944	-31,832324	-19,893144	53
243 4353,0	-41,677109	+43,434811	+19,133421	53	243 4388,0	-43,598566	-36,303310	-21,809831	53
243 4353,5	-46,456611	+39,559266	+16,814372	53	243 4388,5	-38,256191	-40,307485	-23,445285	53
243 4354,0	-50,699479	+35,234223	+14,304311	53	243 4389,0	-32,403205	-43,781757	-24,771667	53
243 4354,5	-54,359492	+30,509985	+11,632322	53	243 4389,5	-26,106653	-46,667060	-25,763916	53
243 4355,0	-57,396091	+25,440227	+8,828792	53	243 4390,0	-19,443125	-48,909597	-26,400408	53
243 4355,5	-59,774424	+20,081634	+5,925256	53	243 4390,5	-12,498567	-50,462566	-26,663789	53
243 4356,0	-61,465500	+14,493723	+2,954257	53	243 4391,0	-5,367520	-51,287681	-26,541716	53
243 4356,5	-62,446398	+8,738595	-0,050766	53	243 4391,5	+1,847962	-51,356903	-26,027643	53
243 4357,0	-62,700373	+2,880727	-3,055618	53	243 4392,0	+9,039920	-50,654080	-25,121559	53
243 4357,5	-62,217357	-3,013219	-6,025467	53	243 4392,5	+16,096595	-49,176322	-23,830497	53
243 4358,0	-60,994211	-8,874681	-8,925029	53	243 4393,0	+22,904964	-46,935070	-22,168916	53
243 4358,5	-59,035207	-14,633493	-11,718733	53	243 4393,5	+29,353602	-43,956644	-20,158732	53
243 4359,0	-56,352542	-20,218329	-14,371012	53	243 4394,0	+35,335740	-40,282257	-17,829117	53
243 4359,5	-52,966884	-25,557229	-16,846588	53	243 4394,5	+40,752284	-35,967348	-15,215917	53
243 4360,0	-48,907936	-30,578329	-19,110912	53	243 4395,0	+45,514641	-31,080336	-12,360798	53
243 4360,5	-44,214848	-35,210679	-21,130592	53	243 4395,5	+49,547069	-25,700755	-9,310118	53
243 4361,0	-38,936719	-39,385377	-22,874024	53	243 4396,0	+52,788540	-19,917050	-6,113659	53
243 4361,5	-33,132716	-43,036743	-24,311994	53	243 4396,5	+55,193856	-13,824032	-2,823246	53
243 4362,0	-26,872155	-46,103821	-25,418446	53	243 4397,0	+56,734224	-7,520313	+0,508601	53
243 4362,5	-20,234090	-48,531820	-26,171202	53	243 4397,5	+57,397043	-1,105766	+3,829966	53
243 4363,0	-13,306689	-50,273811	-26,552771	53	243 4398,0	+57,185258	+5,320781	+7,090648	53
243 4363,5	-6,186123	-51,292317	-26,551078	53	243 4398,5	+56,116343	+11,663556	+10,243110	53
243 4364,0	+1,024963	-51,560758	-26,160100	53	243 4399,0	+54,220855	+17,831533	+13,243245	53
243 4364,5	+8,219338	-51,064753	-25,380381	53	243 4399,5	+51,540953	+23,739746	+16,050921	53
243 4365,0	+15,287442	-49,803038	-24,219337	53	243 4400,0	+48,128803	+29,310290	+18,630366	53
243 4365,5	+22,119853	-47,788044	-22,691371	53	243 4400,5	+44,045013	+34,473032	+20,950435	53
243 4366,0	+28,609856	-45,045896	-20,817680	53	243 4401,0	+39,357106	+39,166046	+22,984687	53
243 4366,5	+34,656005	-41,616064	-18,625890	53	243 4401,5	+34,138147	+43,335910	+24,711451	53
243 4367,0	+40,164493	-37,550491	-16,149429	53	243 4402,0	+28,465410	+46,937750	+26,113749	53
243 4367,5	+45,051215	-32,912289	-13,426720	53	243 4402,5	+22,419226	+49,935288	+27,179212	53
243 4368,0	+49,243537	-27,774220	-10,500267	53	243 4403,0	+16,081885	+52,300695	+27,899946	53
243 4368,5	+52,681517	-22,216842	-7,415623	53	243 4403,5	+9,536666	+54,014463	+28,272374	53
243 4369,0	+55,318791	-16,326635	-4,220355	53	243 4404,0	+2,866942	+55,065188	+28,297059	53
243 4369,5	+57,122981	-10,194053	-0,963040	53	243 4404,5	-3,844676	+55,449276	+27,978500	53
243 4370,0	+58,075774	-3,911656	+2,307721	53	243 4405,0	-10,517081	+55,170709	+27,324942	53
243 4370,5	+58,172594	+2,427671	+5,544165	53	243 4405,5	-17,071401	+54,240716	+26,348161	53
243 4371,0	+57,422098	+8,732325	+8,700167	53	243 4406,0	-23,431666	+52,677362	+25,063198	53
243 4371,5	+55,845401	+14,913434	+11,731921	53	243 4406,5	-29,525405	+50,505217	+23,488146	53
243 4372,0	+53,475197	+20,886152	+14,598535	53	243 4407,0	-35,284233	+47,754907	+21,643880	53
243 4372,5	+50,354727	+26,570755	+17,262507	53	243 4407,5	-40,644301	+44,462628	+19,553770	53
243 4373,0	+46,536645	+31,893570	+19,690138	53	243 4408,0	-45,546808	+40,669764	+17,243440	53
243 4373,5	+42,081964	+36,787815	+21,851860	53	243 4408,5	-49,938277	+36,422273	+14,740445	53
243 4374,0	+37,058735	+41,194166	+23,722443	53	243 4409,0	-53,770981	+31,770321	+12,074045	53
243 4374,5	+31,540931	+45,061336	+25,281205	53	243 4409,5	-57,003165	+26,767715	+9,274896	53
243 4375,0	+25,607150	+48,346351	+26,512054	53	243 4410,0	-59,599238	+21,471420	+6,374792	53
243 4375,5	+19,339457	+51,014882	+27,403573	53	243 4410,5	-61,529938	+15,941087	+3,406411	53
243 4376,0	+12,822143	+53,041261	+27,948936	53	243 4411,0	-62,772505	+10,238613	+0,403077	53
243 4376,5	+6,140569	+54,408475	+28,145820	53	243 4411,5	-63,310754	+4,427700	-2,601471	53
243 4377,0	-0,619926	+55,108087	+27,996289	53	243 4412,0	-63,135156	-1,426573	-5,573313	53
243 4377,5	-7,375084	+55,139895	+27,506527	53	243 4412,5	-62,242938	-7,258126	-8,478525	53
243 4378,0	-14,042690	+54,511626	+26,686629	53	243 4413,0	-60,638199	-13,000267	-11,283420	53
243 4378,5	-20,543401	+53,238440	+25,550264	53	243 4413,5	-58,331984	-18,586073	-13,954709	53
243 4379,0	-26,801532	+51,342525	+24,114431	53	243 4414,0	-55,342508	-23,948775	-16,459752	53
243 4379,5	-32,745652	+48,852432	+22,399061	53	243 4414,5	-51,695239	-29,022169	-18,766747	53
243 4380,0	-38,309108	+45,802561	+20,426712	53	243 4415,0	-47,423203	-33,741101	-20,845014	53
243 4380,5	-43,430469	+42,232607	+18,222262	53	243 4415,5	-42,567149	-38,041996	-22,665275	53
243 4381,0	-48,053777	+38,186891	+15,812551	53	243 4416,0	-37,175847	-41,863518	-24,200007	53
243 4381,5	-52,128869	+33,713951	+13,226128	53	243 4416,5	-31,306227	-45,147280	-25,423830	53
243 4382,0	-55,611412	+28,865894	+10,492952	53	243 4417,0	-25,023608	-47,838830	-26,314011	53
243 4382,5	-58,463143	+23,698059	+7,644156	53	243 4417,5	-18,401690	-49,888637	-26,850972	53
243 4383,0	-60,651899	+18,268548	+4,711838	53	243 4418,0	-11,522441	-51,253311	-27,018902	53
243 4383,5	-62,151678	+12,637870	+1,728862	53	243 4418,5	-4,475733	-51,897018	-26,806451	53
243 4384,0	-62,942731	+6,868612	-1,271316	53	243 4419,0	+2,641380	-51,792924	-26,207408	53
243 4384,5	-63,011748	+1,025175	-4,254812	53	243 4419,5	+9,725729	-50,924720	-25,221385	53
243 4385,0	-62,351921	-4,826525	-7,187439	53	243 4420,0	+16,669592	-49,288126	-23,854491	53
243 4385,5	-60,963244	-10,619325	-10,034907	53	243 4420,5	+23,362732	-46,892205	-22,119821	53
243 4386,0	-58,852685	-16,285089	-12,762944	53	243 4421,0	+29,694866	-43,760373	-20,037795	53

J.D.	x	y	z		J.D.	x	y	z	
243 4421,5	+35,558538	-39,930943	-17,636198	53	243 4456,5	+28,796636	+45,268371	+25,088441	53
243 4422,0	+40,852246	-35,457144	-14,949973	53	243 4457,0	+22,740181	+48,560328	+26,294759	53
243 4422,5	+45,483606	-30,406422	-12,020595	53	243 4457,5	+16,377192	+51,187911	+27,141295	53
243 4423,0	+49,372354	-24,859044	-8,895144	53	243 4458,0	+9,798758	+53,131847	+27,625311	53
243 4423,5	+52,452915	-18,906058	-5,625062	53	243 4458,5	+3,094431	+54,382499	+27,748833	53
243 4424,0	+54,676391	-12,646739	-2,264693	53	243 4459,0	-3,648786	+54,938948	+27,518111	53
243 4424,5	+56,011753	-6,185625	+1,130307	53	243 4459,5	-10,347100	+54,808244	+26,943188	53
243 4425,0	+56,446121	+0,370535	+4,504552	53	243 4460,0	-16,920485	+54,004704	+26,037496	53
243 4425,5	+55,984444	+6,915748	+7,804422	53	243 4460,5	-23,293062	+52,549244	+24,817486	53
243 4426,0	+54,648290	+13,347466	+10,979325	53	243 4461,0	-29,393365	+50,468706	+23,302267	53
243 4426,5	+52,474216	+19,568878	+13,982747	53	243 4461,5	-35,154610	+47,795462	+21,513382	53
243 4427,0	+49,511770	+25,490686	+16,773015	53	243 4462,0	-40,514802	+44,566812	+19,474496	53
243 4427,5	+45,821318	+31,032376	+19,313759	53	243 4462,5	-45,417017	+40,824727	+17,211238	53
243 4428,0	+41,471905	+36,123060	+21,574181	53	243 4463,0	-49,809476	+36,615358	+14,750960	53
243 4428,5	+36,539147	+40,701814	+23,529076	53	243 4463,5	-53,645799	+31,988766	+12,122559	53
243 4429,0	+31,103422	+44,717818	+25,158751	53	243 4464,0	-56,885253	+26,998616	+9,356318	53
243 4429,5	+25,248190	+48,130140	+26,448791	53	243 4464,5	-59,492864	+21,701758	+6,483682	53
243 4430,0	+19,058594	+50,907401	+27,389781	53	243 4465,0	-61,439789	+16,157982	+3,537089	53
243 4430,5	+12,620276	+53,027349	+27,976992	53	243 4465,5	-62,703506	+10,429581	+0,549755	53
243 4431,0	+6,018405	+54,476387	+28,210074	53	243 4466,0	-63,268075	+4,580991	-2,444555	53
243 4431,5	-0,663148	+55,248976	+28,092675	53	243 4466,5	-63,124474	-1,321680	-5,411761	53
243 4432,0	-7,342478	+55,347250	+27,632205	53	243 4467,0	-62,270718	-7,211127	-8,317745	53
243 4432,5	-13,940212	+54,780480	+26,839504	53	243 4467,5	-60,712128	-13,019396	-11,128623	53
243 4433,0	-20,379996	+53,564588	+25,728567	53	243 4468,0	-58,461465	-18,678441	-13,811056	53
243 4433,5	-26,588964	+51,721874	+24,316367	53	243 4468,5	-55,539043	-24,120747	-16,332563	53
243 4434,0	-32,498069	+49,280420	+22,622520	53	243 4469,0	-51,972768	-29,279955	-18,661836	53
243 4434,5	-38,042545	+46,273880	+20,669141	53	243 4469,5	-47,798157	-34,091572	-20,769118	53
243 4435,0	-43,162205	+42,741001	+18,480596	53	243 4470,0	-43,058231	-38,493633	-22,626506	53
243 4435,5	-47,801815	+38,725272	+16,083269	53	243 4470,5	-37,803345	-42,427410	-24,208306	53
243 4436,0	-51,911410	+34,274535	+13,505351	53	243 4471,0	-32,091023	-45,838166	-25,491402	53
243 4436,5	-55,446566	+29,440567	+10,776614	53	243 4471,5	-25,985622	-48,675858	-26,455572	53
243 4437,0	-58,368800	+24,278720	+7,928168	53	243 4472,0	-19,557981	-50,895909	-27,083862	53
243 4437,5	-60,645735	+18,847438	+4,992236	53	243 4472,5	-12,884954	-52,459936	-27,362907	53
243 4438,0	-62,251402	+13,207827	+2,001885	53	243 4473,0	-6,048886	-53,336563	-27,283302	53
243 4438,5	-63,166465	+7,423204	-1,009214	53	243 4473,5	+0,863063	-53,502190	-26,839930	53
243 4439,0	-63,378363	+1,558575	-4,007047	53	243 4474,0	+7,759709	-52,941759	-26,032288	53
243 4439,5	-62,881483	-4,319818	-6,957523	53	243 4474,5	+14,546773	-51,649534	-24,864804	53
243 4440,0	-61,677263	-10,145011	-9,826727	53	243 4475,0	+21,128027	-49,629914	-23,347159	53
243 4440,5	-59,774308	-15,849833	-12,581196	53	243 4475,5	+27,406606	-46,898013	-21,494474	53
243 4441,0	-57,188419	-21,367389	-15,188173	53	243 4476,0	+33,286553	-43,480287	-19,327497	53
243 4441,5	-53,942644	-26,631607	-17,615868	53	243 4476,5	+38,674584	-39,414910	-16,872667	53
243 4442,0	-50,067322	-31,577745	-19,833751	53	243 4477,0	+43,482035	-34,751924	-14,162034	53
243 4442,5	-45,600069	-36,142939	-21,812797	53	243 4477,5	+47,627029	-29,553157	-11,233043	53
243 4443,0	-40,585833	-40,266790	-23,525808	53	243 4478,0	+51,036688	-23,891649	-8,128071	53
243 4443,5	-35,076815	-43,891964	-24,947705	53	243 4478,5	+53,649303	-17,850701	-4,893790	53
243 4444,0	-29,132472	-46,964874	-26,055876	53	243 4479,0	+55,416514	-11,522480	-1,580289	53
243 4444,5	-22,819421	-49,436427	-26,830530	53	243 4479,5	+56,350517	-5,006122	+1,760019	53
243 4445,0	-16,211278	-51,262859	-27,255135	53	243 4480,0	+56,297910	+1,594582	+5,073646	53
243 4445,5	-9,388410	-52,406637	-27,316830	53	243 4480,5	+55,395523	+8,173742	+8,307397	53
243 4446,0	-2,437509	-52,837468	-27,006927	53	243 4481,0	+53,615505	+14,626164	+11,409766	53
243 4446,5	+4,548987	-52,533463	-26,321427	53	243 4481,5	+50,992216	+20,850082	+14,332284	53
243 4447,0	+11,473773	-51,482172	-25,261499	53	243 4482,0	+47,575492	+26,749733	+17,030692	53
243 4447,5	+18,235831	-49,681828	-23,834007	53	243 4482,5	+43,428875	+32,237599	+19,465943	53
243 4448,0	+24,731930	-47,142407	-22,051945	53	243 4483,0	+38,627293	+37,236128	+21,604887	53
243 4448,5	+30,858513	-43,886601	-19,934772	53	243 4483,5	+33,254683	+41,679028	+23,420745	53
243 4449,0	+36,513942	-39,950516	-17,508597	53	243 4484,0	+27,401424	+45,511957	+24,893236	53
243 4449,5	+41,601064	-35,384000	-14,806152	53	243 4484,5	+21,161854	+48,692681	+26,008483	53
243 4450,0	+46,029992	-30,250470	-11,866494	53	243 4485,0	+14,632099	+51,190924	+26,758758	53
243 4450,5	+49,720950	-24,626186	-8,734405	53	243 4485,5	+7,908107	+52,987775	+27,142045	53
243 4451,0	+52,607009	-18,598862	-5,459487	53	243 4486,0	+1,084056	+54,074942	+27,161524	53
243 4451,5	+54,636463	-12,265681	-2,094980	53	243 4486,5	-5,748917	+54,453836	+26,825023	53
243 4452,0	+55,774719	-5,730788	+1,303675	53	243 4487,0	-12,503664	+54,134621	+26,144463	53
243 4452,5	+56,005350	+0,897658	+4,680392	53	243 4487,5	-19,097698	+53,135227	+25,135294	53
243 4453,0	+55,330526	+7,510565	+7,980052	53	243 4488,0	-25,453690	+51,480533	+23,816080	53
243 4453,5	+53,770408	+14,000996	+11,149999	53	243 4488,5	-31,499699	+49,201480	+22,207987	53
243 4454,0	+51,361962	+20,266998	+14,141404	53	243 4489,0	-37,169398	+46,334413	+20,334467	53
243 4454,5	+48,157002	+26,214007	+16,910327	53	243 4489,5	-42,402121	+42,920433	+18,220919	53
243 4455,0	+44,219927	+31,756706	+19,418483	53	243 4490,0	-47,142883	+39,004860	+15,894408	53
243 4455,5	+39,625273	+36,820370	+21,633734	53	243 4490,5	-51,342483	+34,636853	+13,383467	53
243 4456,0	+34,455097	+41,341559	+23,530247	53	243 4491,0	-54,957471	+29,868967	+10,717883	53

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z	J.D.	x	y	z		
243 4491,5	-57,950231	+24,756866	+ 7,928541	53	243 4526,5	-19,714162	-50,390322	-26,558102	53
243 4492,0	-60,289117	+19,359021	+ 5,047255	53	243 4527,0	-12,950995	-52,060068	-26,834046	53
243 4492,5	-61,948613	+13,736442	+ 2,106630	53	243 4527,5	- 6,017908	-53,037483	-26,752286	53
243 4493,0	-62,909476	+ 7,952351	- 0,860129	53	243 4528,0	+ 0,992853	-53,299226	-26,308822	53
243 4493,5	-63,158974	+ 2,071893	- 3,819372	53	243 4528,5	+ 7,985423	-52,831799	-25,504857	53
243 4494,0	-62,691208	- 3,838233	- 6,737223	53	243 4529,0	+14,861822	-51,632307	-24,347035	53
243 4494,5	-61,507320	- 9,710195	- 9,579800	53	243 4529,5	+21,523588	-49,708936	-22,847552	53
243 4495,0	-59,615784	-15,475494	-12,313480	53	243 4530,0	+27,873500	-47,081132	-21,024101	53
243 4495,5	-57,032656	-21,065542	-14,905205	53	243 4530,5	+33,817398	-43,779708	-18,899762	53
243 4496,0	-53,781805	-26,412284	-17,322804	53	243 4531,0	+39,265879	-39,846451	-16,502685	53
243 4496,5	-49,895002	-31,448892	-19,535360	53	243 4531,5	+44,136057	-35,333699	-13,865721	53
243 4497,0	-45,412022	-36,110560	-21,513608	53	243 4532,0	+48,353162	-30,303588	-11,025917	53
243 4497,5	-40,380570	-40,335311	-23,230331	53	243 4532,5	+51,851974	-24,827068	- 8,023907	53
243 4498,0	-34,856151	-44,064913	-24,660824	53	243 4533,0	+54,578137	-18,982771	- 4,903248	53
243 4498,5	-28,901699	-47,245707	-25,783254	53	243 4533,5	+56,489233	-12,855682	- 1,709654	53
243 4499,0	-22,587207	-49,829594	-26,579138	53	243 4534,0	+57,555664	- 6,535692	+ 1,509780	53
243 4499,5	-15,989088	-51,774875	-27,033710	53	243 4534,5	+57,761256	- 0,115994	+ 4,707439	53
243 4500,0	- 9,189467	-53,047105	-27,136291	53	243 4535,0	+57,103612	+ 6,308574	+ 7,836034	53
243 4500,5	- 2,275301	-53,619922	-26,880624	53	243 4535,5	+55,594196	+12,643250	+10,849459	53
243 4501,0	+ 4,662630	-53,475712	-26,265140	53	243 4536,0	+53,258143	+18,795106	+13,703667	53
243 4501,5	+11,530837	-52,606329	-25,293213	53	243 4536,5	+50,133669	+24,674739	+16,357441	53
243 4502,0	+18,234376	-51,013541	-23,973285	53	243 4537,0	+46,271326	+30,197923	+18,773167	53
243 4502,5	+24,678171	-48,709454	-22,318984	53	243 4537,5	+41,732876	+35,287114	+20,917487	53
243 4503,0	+30,768493	-45,716859	-20,349156	53	243 4538,0	+36,589957	+39,872815	+22,761854	53
243 4503,5	+36,414424	-42,069243	-18,087770	53	243 4538,5	+30,922485	+43,894674	+24,282961	53
243 4504,0	+41,529538	-37,810841	-15,563797	53	243 4539,0	+24,816955	+47,302347	+25,463019	53
243 4504,5	+46,033425	-32,996268	-12,810912	53	243 4539,5	+18,364609	+50,056097	+26,289899	53
243 4505,0	+49,853473	-27,690154	- 9,867164	53	243 4540,0	+11,659598	+52,127069	+26,757126	53
243 4505,5	+52,926407	-21,966342	- 6,774449	53	243 4540,5	+ 4,797164	+53,497232	+26,863692	53
243 4506,0	+55,199979	-15,906958	- 3,577923	53	243 4541,0	- 2,128011	+54,159179	+26,613817	53
243 4506,5	+56,634308	- 9,601081	- 0,325210	53	243 4541,5	- 9,023334	+54,115583	+26,016560	53
243 4507,0	+57,203208	- 3,143234	+ 2,934445	53	243 4542,0	-15,799629	+53,378553	+25,085383	53
243 4507,5	+56,895078	+ 3,368456	+ 6,151162	53	243 4542,5	-22,372189	+51,968753	+23,837616	53
243 4508,0	+55,713588	+ 9,834275	+ 9,275501	53	243 4543,0	-28,661659	+49,914591	+22,294008	53
243 4508,5	+53,677731	+16,155078	+12,259537	53	243 4543,5	-34,594651	+47,251282	+20,478179	53
243 4509,0	+50,821583	+22,234524	+15,057947	53	243 4544,0	-40,104176	+44,019936	+18,416155	53
243 4509,5	+47,193514	+27,981259	+17,629053	53	243 4544,5	-45,129888	+40,266706	+16,135902	53
243 4510,0	+42,854849	+33,130890	+19,935681	53	243 4545,0	-49,618277	+36,042079	+13,666981	53
243 4510,5	+37,878278	+38,147784	+21,945947	53	243 4545,5	-53,522566	+31,400055	+11,040125	53
243 4511,0	+32,345783	+42,426391	+23,633735	53	243 4546,0	-56,802815	+26,397678	+ 8,287013	53
243 4511,5	+26,346542	+46,092309	+24,979077	53	243 4546,5	-59,425732	+21,094428	+ 5,439974	53
243 4512,0	+19,974604	+49,102779	+25,968204	53	243 4547,0	-61,364600	+15,551825	+ 2,531801	53
243 4512,5	+13,326703	+51,426824	+26,593428	53	243 4547,5	-62,599268	+ 9,833065	+ 0,404433	53
243 4513,0	+ 6,500242	+53,045083	+26,852935	53	243 4548,0	-63,116074	+ 4,002707	- 3,335531	53
243 4513,5	- 0,408551	+53,949213	+26,750294	53	243 4548,5	-62,907892	- 1,873610	- 6,228304	53
243 4514,0	- 7,306146	+54,141194	+26,294027	53	243 4549,0	-61,974155	- 7,729434	- 9,049721	53
243 4514,5	-14,102947	+53,632394	+25,497012	53	243 4549,5	-60,321069	-13,497776	-11,767057	53
243 4515,0	-20,714247	+52,442598	+24,375946	53	243 4550,0	-57,961709	-19,111406	-14,348046	53
243 4515,5	-27,060862	+50,599002	+22,950780	53	243 4550,5	-54,916358	-24,503238	-16,761120	53
243 4516,0	-33,069625	+48,135335	+21,244236	53	243 4551,0	-51,212697	-29,606759	-18,975612	53
243 4516,5	-38,673628	+45,090941	+19,281339	53	243 4551,5	-46,886152	-34,356593	-20,962086	53
243 4517,0	-43,812309	+41,509959	+17,088993	53	243 4552,0	-41,980099	-38,689145	-22,692671	53
243 4517,5	-48,431562	+37,440751	+14,695689	53	243 4552,5	-36,546083	-42,543399	-24,141462	53
243 4518,0	-52,483578	+32,935182	+12,131162	53	243 4553,0	-30,643945	-45,861842	-25,285020	53
243 4518,5	-55,926897	+28,048272	+ 9,426193	53	243 4553,5	-24,341751	-48,591553	-26,102871	53
243 4519,0	-58,726339	+22,837727	+ 6,612400	53	243 4554,0	-17,715545	-50,685351	-26,578079	53
243 4519,5	-60,852935	+17,363613	+ 3,722070	53	243 4554,5	-10,848833	-52,103009	-26,697786	53
243 4520,0	-62,284053	+11,688084	+ 0,788006	53	243 4555,0	- 3,831817	-52,812559	-26,453818	53
243 4520,5	-63,003316	+ 5,875080	- 2,156600	53	243 4555,5	+ 3,239712	-52,791535	-25,843172	53
243 4521,0	-63,000918	- 0,009898	- 5,078339	53	243 4556,0	+10,265810	-52,028053	-24,868461	53
243 4521,5	-62,273682	- 5,900105	- 7,943708	53	243 4556,5	+17,144065	-50,521769	-23,538234	53
243 4522,0	-60,825347	-11,727861	-10,719323	53	243 4557,0	+23,771600	-48,284583	-21,867141	53
243 4522,5	-58,666864	-17,424939	-13,372122	53	243 4557,5	+30,047211	-45,340909	-19,875906	53
243 4523,0	-55,816610	-22,923034	-15,869620	53	243 4558,0	+35,873596	-41,727692	-17,591135	53
243 4523,5	-52,300747	-28,154317	-18,180216	53	243 4558,5	+41,159574	-37,493957	-15,044898	53
243 4524,0	-48,153438	-33,052106	-20,273540	53	243 4559,0	+45,822215	-32,700009	-12,274162	53
243 4524,5	-43,417022	-37,551631	-22,120853	53	243 4559,5	+49,788631	-27,416216	- 9,320019	53
243 4525,0	-38,142115	-41,590918	-23,695501	53	243 4560,0	+52,997640	-21,721610	- 6,226868	53
243 4525,5	-32,387537	-45,111745	-24,973363	53	243 4560,5	+55,400921	-15,702158	- 3,041451	53
243 4526,0	-26,220102	-48,060717	-25,933400	53	243 4561,0	+56,963858	- 9,448950	+ 0,188128	53

J.D.	x	y	z	J.D.	x	y	z		
243 4561,5	+57,666058	- 3,056322	+ 3,413361	53	243 4586,5	+46,546059	-30,675845	-11,182934	54
243 4562,0	+57,501371	+ 3,380047	+ 6,586292	53	243 4587,0	+50,298446	-25,147822	- 8,121205	54
243 4562,5	+56,477673	+ 9,764946	+ 9,660392	53	243 4587,5	+53,258882	-19,228775	- 4,934083	54
243 4563,0	+54,616396	+16,005269	+12,591342	53	243 4588,0	+55,380960	-13,012306	- 1,671941	54
243 4563,5	+51,951569	+22,011967	+15,337893	53	243 4588,5	+56,634036	- 6,597013	+ 1,613738	54
Epoch 1954.0									
243 4555,0	- 3,817443	-52,813414	-26,454189	54	243 4589,0	+57,003664	- 0,084050	+ 4,871605	54
243 4555,5	+ 3,254022	-52,790810	-25,842856	54	243 4589,5	+56,491366	+ 6,425306	+ 8,051620	54
243 4556,0	+10,279855	-52,025757	-24,867463	54	243 4590,0	+55,113961	+12,831877	+11,106117	54
243 4556,5	+17,157643	-50,517936	-23,536567	54	243 4590,5	+52,902505	+19,040600	+13,990694	54
243 4557,0	+23,784516	-48,279268	-21,864830	54	243 4591,0	+49,900906	+24,962210	+16,664925	54
243 4557,5	+30,059275	-45,334192	-19,872986	54	243 4591,5	+46,164329	+30,514594	+19,092915	54
243 4558,0	+35,884631	-41,719673	-17,587648	54	243 4592,0	+41,757573	+35,623845	+21,243649	54
243 4558,5	+41,169414	-37,484757	-15,040898	54	243 4592,5	+36,753383	+40,225004	+23,091245	54
243 4559,0	+45,830715	-32,689766	-12,269709	54	243 4593,0	+31,230779	+44,262518	+24,615014	54
243 4559,5	+49,795663	-27,405087	- 9,315180	54	243 4593,5	+25,273566	+47,690582	+25,799510	54
243 4560,0	+53,003098	-21,709764	- 6,221718	54	243 4594,0	+18,968790	+50,473119	+26,634396	54
243 4560,5	+55,404725	-15,689776	- 3,036067	54	243 4594,5	+12,405428	+52,583800	+27,114314	54
243 4561,0	+56,965950	- 9,436218	+ 0,193664	54	243 4595,0	+ 5,673109	+54,005810	+27,238685	54
243 4561,5	+57,666408	- 3,043433	+ 3,418964	54	243 4595,5	- 1,139025	+54,731566	+27,011458	54
243 4562,0	+57,499974	+ 3,392899	+ 6,591879	54	243 4596,0	- 7,943367	+54,762377	+26,440857	54
243 4562,5	+56,474550	+ 9,777569	+ 9,665879	54	243 4596,5	-14,654784	+54,107965	+25,539046	54
243 4563,0	+54,611564	+16,017550	+12,596681	54	243 4597,0	-21,191484	+52,786053	+24,321876	54
243 4563,5	+51,945157	+22,023578	+15,342941	54	243 4597,5	-27,475772	+50,821741	+22,808481	54
243 4564,0	+48,521188	+27,711534	+17,866879	54	243 4598,0	-33,434719	+48,246954	+21,020976	54
243 4564,5	+44,396148	+33,003718	+20,134796	54	243 4598,5	-39,000761	+45,099877	+18,984097	54
243 4565,0	+39,635829	+37,829870	+22,117484	54	243 4599,0	-44,112140	+41,424210	+16,724806	54
243 4565,5	+34,314012	+42,128059	+23,790554	54	243 4599,5	-48,713345	+37,268599	+14,271980	54
243 4566,0	+28,510992	+45,845354	+25,134626	54	243 4600,0	-52,755402	+32,685942	+11,656028	54
243 4566,5	+22,312136	+48,938320	+26,135471	54	243 4600,5	-56,196038	+27,732717	+ 8,908549	54
243 4567,0	+15,806385	+51,373368	+26,784049	54	243 4601,0	-58,999890	+22,468386	+ 6,062020	54
243 4567,5	+ 9,084776	+53,126817	+27,076407	54	243 4601,5	-61,138502	+16,954770	+ 3,149488	54
243 4568,0	+ 2,239036	+54,184889	+27,013578	54	243 4602,0	-62,590447	+11,255493	+ 0,204277	54
243 4568,5	- 4,639789	+54,543504	+26,601327	54	243 4602,5	-63,341086	+ 5,435415	- 2,740260	54
243 4569,0	-11,462596	+54,207878	+25,849882	54	243 4603,0	-63,382754	- 0,439789	- 5,650976	54
243 4569,5	-18,143345	+53,191994	+24,773542	54	243 4603,5	-62,714458	- 6,304119	- 8,495141	54
243 4570,0	-24,600085	+51,518056	+23,390342	54	243 4604,0	-61,341936	-12,091617	-11,240638	54
243 4570,5	-30,755775	+49,215715	+21,721589	54	243 4604,5	-59,277529	-17,736753	-13,856126	54
243 4571,0	-36,538985	+46,321336	+19,791431	54	243 4605,0	-56,540196	-23,174788	-16,311241	54
243 4571,5	-41,884424	+42,877227	+17,626446	54	243 4605,5	-53,155471	-28,342114	-18,576740	54
243 4572,0	-46,733339	+38,930829	+15,255195	54	243 4606,0	-49,155474	-33,176611	-20,624692	54
243 4572,5	-51,033725	+34,533956	+12,707830	54	243 4606,5	-44,579012	-37,618050	-22,428680	54
243 4573,0	-54,740478	+29,742056	+10,015712	54	243 4607,0	-39,471666	-41,608580	-23,964047	54
243 4573,5	-57,815492	+24,613613	+ 7,211107	54	243 4607,5	-33,885794	-45,093130	-25,208092	54
243 4574,0	-60,227524	+19,209451	+ 4,326862	54	243 4608,0	-27,880746	-48,020144	-26,140465	54
243 4574,5	-61,952228	+13,592298	+1,396155	54	243 4608,5	-21,522840	-50,342229	-26,743460	54
243 4575,0	-62,972023	+ 7,826269	- 1,547706	54	243 4609,0	-14,885364	-52,017042	-27,002479	54
243 4575,5	-63,276037	+ 1,976491	- 4,471512	54	243 4609,5	- 8,048408	-53,008219	-26,906460	54
243 4576,0	-62,859994	- 3,891263	- 7,342280	54	243 4610,0	+ 1,098549	-53,286514	-26,448410	54
243 4576,5	-61,726253	- 9,710875	-10,127451	54	243 4610,5	+ 5,871729	-52,831035	-25,625984	54
243 4577,0	-59,883775	-15,416192	-12,794995	54	243 4611,0	+12,764925	-51,630422	-24,441965	54
243 4577,5	-57,348214	-20,941321	-15,313608	54	243 4611,5	+19,479758	-49,684243	-22,904859	54
243 4578,0	-54,142037	-26,220946	-17,652845	54	243 4612,0	+25,912812	-47,004075	-21,029290	54
243 4578,5	-50,294654	-31,190680	-19,783332	54	243 4612,5	+31,960599	-43,614546	-18,836330	54
243 4579,0	-45,842714	-35,787537	-21,677008	54	243 4613,0	+37,521961	-39,553953	-16,353596	54
243 4579,5	-40,830218	-39,950404	-23,307378	54	243 4613,5	+42,500819	-34,874502	-13,615135	54
243 4580,0	-35,308811	-43,620728	-24,649877	54	243 4614,0	+46,809034	-29,641949	-10,661005	54
243 4580,5	-29,337913	-46,743258	-25,682247	54	243 4614,5	+50,369244	-23,934628	- 7,536542	54
243 4581,0	-22,984819	-49,266991	-26,385013	54	243 4615,0	+53,117477	-17,841830	- 4,291343	54
243 4581,5	-16,324605	-51,146190	-26,741987	54	243 4615,5	+55,005307	-11,461668	- 0,978020	54
243 4582,0	- 9,439895	-52,341616	-26,740855	54	243 4616,0	+56,001424	- 4,898422	+ 2,349237	54
243 4582,5	- 2,420293	-52,821783	-26,373742	54	243 4616,5	+56,092482	+ 1,740345	+ 5,636174	54
243 4583,0	+ 4,638445	-52,564343	-25,637835	54	243 4617,0	+55,283049	+ 8,346791	+ 8,829931	54
243 4583,5	+11,635648	-51,557387	-24,535924	54	243 4617,5	+53,594957	+14,815627	+11,880400	54
243 4584,0	+18,467334	-49,800682	-23,076861	54	243 4618,0	+51,066007	+21,046698	+14,713392	54
243 4584,5	+25,028185	-47,306675	-21,275897	54	243 4618,5	+47,748083	+26,947100	+17,371501	54
243 4585,0	+31,213885	-44,101155	-19,154816	54	243 4619,0	+43,705127	+32,432883	+19,734793	54
243 4585,5	+36,923665	-40,223549	-16,741840	54	243 4619,5	+39,010791	+37,430171	+21,801140	54
243 4586,0	+42,062966	-35,726650	-14,071282	54	243 4620,0	+33,746259	+41,875886	+23,546406	54
					243 4620,5	+27,998068	+45,718033	+24,952373	54
					243 4621,0	+21,856210	+48,915663	+26,006589	54

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z	J.D.	x	y	z		
243 4621,5	+15,412403	+51,438631	+26,702078	54	243 4656,5	-62,672485	+11,426284	+ 0,306856	54
243 4622,0	+ 8,758627	+53,267126	+27,036991	54	243 4657,0	-63,436336	+ 5,587211	- 2,606457	54
243 4622,5	+ 1,985860	+54,391093	+27,014198	54	243 4657,5	-63,498198	+ 0,317651	- 5,491596	54
243 4623,0	- 4,816936	+54,809633	+26,640934	54	243 4658,0	-62,857729	- 6,221885	- 8,316104	54
243 4623,5	-11,563681	+54,530429	+25,928399	54	243 4658,5	-61,521447	-12,058977	-11,048086	54
243 4624,0	-18,171896	+53,568970	+24,891356	54	243 4659,0	-59,502797	-17,762819	-13,656444	54
243 4624,5	-24,563288	+51,948036	+23,547788	54	243 4659,5	-56,822123	-23,268240	-16,111154	54
243 4625,0	-30,664247	+49,697055	+21,918556	54	243 4660,0	-53,506571	-28,511516	-18,383484	54
243 4625,5	-36,406271	+46,851508	+20,027058	54	243 4660,5	-49,590036	-33,430928	-20,446287	54
243 4626,0	-41,726342	+43,452405	+17,898946	54	243 4661,0	-45,112952	-37,967272	-22,274214	54
243 4626,5	-46,567223	+39,545668	+15,561784	54	243 4661,5	-40,122159	-42,064417	-23,843979	54
243 4627,0	-50,877766	+35,181655	+13,044798	54	243 4662,0	-34,670670	-45,669842	-25,134602	54
243 4627,5	-54,613153	+30,414587	+10,378561	54	243 4662,5	-28,817459	-48,735229	-26,127672	54
243 4628,0	-57,735078	+25,301192	+ 7,594718	54	243 4663,0	-22,627081	-51,216939	-26,807545	54
243 4628,5	-60,211903	+19,904190	+ 4,725694	54	243 4663,5	-16,169437	-53,076694	-27,161665	54
243 4629,0	-62,018785	+14,283737	+ 1,804434	54	243 4664,0	- 9,519310	-54,282035	-27,180724	54
243 4629,5	-63,137750	+ 8,504907	+ 1,135866	54	243 4664,5	- 2,755965	-54,807061	-26,859012	54
243 4630,0	-63,557783	+ 2,633169	+ 4,062039	54	243 4665,0	+ 4,037379	-54,632918	-26,194586	54
243 4630,5	-63,274706	+ 3,265342	+ 6,941183	54	243 4665,5	+10,774154	-53,748585	-25,189610	54
243 4631,0	-62,291337	+ 9,124319	+ 9,740909	54	243 4666,0	+17,365167	-52,151462	-23,850574	54
243 4631,5	-60,617189	-14,877746	-12,429568	54	243 4666,5	+23,719490	-49,848130	-22,188585	54
243 4632,0	-58,268618	-20,460388	-14,976488	54	243 4667,0	+29,745499	-46,854956	-20,219562	54
243 4632,5	-55,268540	-25,808206	-17,352153	54	243 4667,5	+35,352191	-43,198831	-17,964484	54
243 4633,0	-51,646502	-30,858821	-19,528451	54	243 4668,0	+40,450672	-38,917591	-15,449470	54
243 4633,5	-47,438466	-35,551920	-21,478838	54	243 4668,5	+44,955897	-34,060420	-12,705807	54
243 4634,0	-42,686778	-39,829709	-23,178564	54	243 4669,0	+48,788681	-28,687974	- 9,769840	54
243 4634,5	-37,440102	-43,637381	-24,604901	54	243 4669,5	+51,877847	-22,872134	- 6,682678	54
243 4635,0	-31,753282	-46,923574	-25,737349	54	243 4670,0	+54,162490	-16,695399	- 3,489672	54
243 4635,5	-25,687308	-49,640943	-26,557903	54	243 4670,5	+55,594254	-10,249757	- 0,239701	54
243 4636,0	-19,309147	-51,746719	-27,051329	54	243 4671,0	+56,139405	- 3,635034	+ 3,015833	54
243 4636,5	-12,691602	-53,203336	-27,205447	54	243 4671,5	+55,780561	+ 3,043245	+ 6,224172	54
243 4637,0	- 5,913125	-53,979244	-27,011522	54	243 4672,0	+54,517914	+ 9,676444	+ 9,332584	54
243 4637,5	+ 0,942559	-54,049736	-26,464624	54	243 4672,5	+52,369775	+16,155727	+12,289811	54
243 4638,0	+ 7,786905	-53,397797	-25,564019	54	243 4673,0	+49,372361	+22,375086	+15,047536	54
243 4638,5	+14,527248	-52,015218	-24,313641	54	243 4673,5	+45,578782	+28,234332	+17,561726	54
243 4639,0	+21,067737	-49,903547	-22,722482	54	243 4674,0	+41,057271	+33,641737	+19,793783	54
243 4639,5	+27,310595	-47,075169	-20,805018	54	243 4674,5	+35,888892	+38,516310	+21,711436	54
243 4640,0	+33,157679	-43,554200	-18,581498	54	243 4675,0	+30,164779	+42,789406	+23,289287	54
243 4640,5	+38,512457	-39,377332	-16,078200	54	243 4675,5	+23,983268	+46,405786	+24,509075	54
243 4641,0	+43,282260	-34,594232	-13,327428	54	243 4676,0	+17,446961	+49,323936	+25,359576	54
243 4641,5	+47,380885	-29,267702	-10,367365	54	243 4676,5	+10,660072	+51,515946	+25,836315	54
243 4642,0	+50,731269	-23,473168	- 7,241601	54	243 4677,0	+ 3,726064	+52,966920	+25,941071	54
243 4642,5	+53,268296	-17,297695	- 3,998402	54	243 4677,5	- 3,254334	+53,673956	+25,681224	54
243 4643,0	+54,941283	-10,838282	- 0,689667	54	243 4678,0	-10,184668	+53,645076	+25,069077	54
243 4643,5	+55,716144	+ 4,199605	+ 2,630370	54	243 4678,5	-16,973893	+52,897943	+24,121152	54
243 4644,0	+55,576843	+ 2,508792	+ 5,906627	54	243 4679,0	-23,537169	+51,458627	+22,857515	54
243 4644,5	+54,526201	+ 9,175573	+ 9,084774	54	243 4679,5	-29,796360	+49,360483	+21,301184	54
243 4645,0	+52,585688	+15,690844	+12,112784	54	243 4680,0	-35,680260	+46,643001	+19,477558	54
243 4645,5	+49,794468	+21,949236	+14,942361	54	243 4680,5	-41,124748	+43,350952	+17,413972	54
243 4646,0	+46,207768	+27,852691	+17,530184	54	243 4681,0	-46,072701	+39,533472	+15,139275	54
243 4646,5	+41,894554	+33,312703	+19,838784	54	243 4681,5	-50,473974	+35,243446	+12,683520	54
243 4647,0	+36,934905	+38,251976	+21,837150	54	243 4682,0	-54,285254	+30,536881	+10,077676	54
243 4647,5	+31,417328	+42,605515	+23,501031	54	243 4682,5	-57,469966	+25,472410	+ 7,353389	54
243 4648,0	+25,436001	+46,321069	+24,812904	54	243 4683,0	-59,998180	+20,110861	+ 4,542781	54
243 4648,5	+19,088318	+49,359111	+25,761771	54	243 4683,5	-61,846523	+14,514878	+ 1,678275	54
243 4649,0	+12,472647	+51,692383	+26,342730	54	243 4684,0	-62,998256	+ 8,748596	- 1,207578	54
243 4649,5	+ 5,686525	+53,305242	+26,556508	54	243 4684,5	-63,443219	+ 2,877247	- 4,082276	54
243 4650,0	- 1,174864	+54,192752	+26,408874	54	243 4685,0	-63,177839	- 3,033152	- 6,913537	54
243 4650,5	- 8,019824	+53,559708	+25,100070	54	243 4685,5	-62,205341	- 8,916189	- 9,669488	54
243 4651,0	-14,761028	+53,819671	+25,074255	54	243 4686,0	-60,535691	-14,705474	-12,318870	54
243 4651,5	-21,316145	+52,594071	+23,919019	54	243 4686,5	-58,185747	-20,335080	-14,831274	54
243 4652,0	-27,608273	+50,711288	+22,464883	54	243 4687,0	-55,179296	-25,740054	-17,177380	54
243 4652,5	-33,566248	+48,205857	+20,734902	54	243 4687,5	-51,547091	-30,856963	-19,329227	54
243 4653,0	-39,124858	+45,117809	+18,754291	54	243 4688,0	-47,326751	-35,624442	-21,260477	54
243 4653,5	-44,224912	+41,491908	+16,550078	54	243 4688,5	-42,562780	-39,983893	-22,946742	54
243 4654,0	-48,813462	+37,377262	+14,150856	54	243 4689,0	-37,306285	-43,880042	-24,365853	54
243 4654,5	-52,843783	+32,826674	+11,586493	54	243 4689,5	-31,614834	-47,261735	-25,498196	54
243 4655,0	-56,275494	+27,896214	+ 8,887901	54	243 4690,0	-25,552009	-50,082487	-26,326971	54
243 4655,5	-59,074666	+22,644801	+ 6,086814	54	243 4690,5	-19,187087	-52,301322	-26,838546	54
243 4656,0	-61,213931	+17,133740	+ 3,215565	54	243 4691,0	-12,594403	-53,883267	-27,022646	54

J.D.	x	y	z	J.D.	x	y	z		
243 4691,5	- 5,852806	-54,800148	-26,872690	54	243 4726,5	+56,745114	+ 7,179556	+ 8,657426	54
243 4692,0	+ 0,955087	-55,031110	-26,385965	54	243 4727,0	+54,967259	+13,527716	+11,535734	54
243 4692,5	+ 7,743673	-54,563191	-25,563843	54	243 4727,5	+52,359628	+19,676392	+14,241885	54
243 4693,0	+14,425259	-53,391851	-24,411952	54	243 4728,0	+48,959626	+25,533187	+16,734977	54
243 4693,5	+20,911028	-51,521407	-22,940307	54	243 4728,5	+44,817995	+31,010161	+18,977494	54
243 4694,0	+27,112078	-48,965420	-21,163383	54	243 4729,0	+39,997993	+36,025673	+20,936089	54
243 4694,5	+32,940587	-45,747019	-19,100185	54	243 4729,5	+34,574170	+40,506085	+22,582317	54
243 4695,0	+38,311014	-41,899099	-16,774221	54	243 4730,0	+28,630781	+44,387269	+23,893186	54
243 4695,5	+43,141533	-37,464521	-14,213480	54	243 4730,5	+22,260009	+47,615934	+24,851644	54
243 4696,0	+47,355352	-32,495950	-11,450219	54	243 4731,0	+15,559853	+50,150516	+25,446804	54
243 4696,5	+50,882371	-27,055780	- 8,520796	54	243 4731,5	+ 8,631940	+51,961778	+25,674036	54
243 4697,0	+53,660639	-21,215630	- 5,465279	54	243 4732,0	+ 1,579315	+53,032991	+25,534846	54
243 4697,5	+55,638164	-15,055764	- 2,327009	54	243 4732,5	- 5,495717	+53,359722	+25,036577	54
243 4698,0	+56,774336	- 8,664048	+ 0,848028	54	243 4733,0	-12,493534	+52,949295	+24,191958	54
243 4698,5	+57,041623	- 2,134740	+ 4,011943	54	243 4733,5	-19,318951	+51,819963	+23,018566	54
243 4699,0	+56,426789	+ 4,433195	+ 7,115862	54	243 4734,0	-25,882612	+49,999817	+21,538159	54
243 4699,5	+54,931950	+10,937999	+10,110943	54	243 4734,5	-32,102105	+47,525652	+19,776030	54
243 4700,0	+52,575213	+17,277360	+12,949512	54	243 4735,0	-37,902730	+44,441666	+17,760307	54
243 4700,5	+49,390804	+23,350842	+15,586245	54	243 4735,5	-43,218006	+40,798252	+15,521343	54
243 4701,0	+45,428596	+29,062379	+17,979333	54	243 4736,0	-47,989869	+36,650782	+13,091088	54
243 4701,5	+40,753043	+34,322727	+20,091555	54	243 4736,5	-52,168713	+32,058523	+10,502597	54
243 4702,0	+35,441601	+39,051705	+21,891227	54	243 4737,0	-55,713231	+27,083678	+ 7,789552	54
243 4702,5	+29,582580	+43,180070	+23,352920	54	243 4737,5	-58,590236	+21,790595	+ 4,985917	54
243 4703,0	+23,272695	+46,650956	+24,457911	54	243 4738,0	-60,774239	+16,244993	+ 2,125595	54
243 4703,5	+16,614375	+49,420764	+25,194385	54	243 4738,5	-62,247279	+10,513487	- 0,757778	54
243 4704,0	+ 9,713065	+51,459467	+25,557349	54	243 4739,0	-62,998485	+ 4,663061	- 3,631039	54
243 4704,5	+ 2,674670	+52,750528	+25,548345	54	243 4739,5	-63,023905	- 1,239277	- 6,461676	54
243 4705,0	- 4,396757	+53,290222	+25,174915	54	243 4740,0	-62,326179	- 7,126804	- 9,217905	54
243 4705,5	-11,400981	+53,086699	+24,450002	54	243 4740,5	-60,914506	-12,933351	-11,868839	54
243 4706,0	-18,243155	+52,158807	+23,391205	54	243 4741,0	-58,804465	-18,593559	-14,384568	54
243 4706,5	-24,834974	+50,534785	+22,020072	54	243 4741,5	-56,018034	-24,043135	-16,736293	54
243 4707,0	-31,095452	+48,250883	+20,361353	54	243 4742,0	-52,583599	-29,219144	-18,896462	54
243 4707,5	-36,951432	+45,350146	+18,442376	54	243 4742,5	-48,535999	-34,060350	-20,838949	54
243 4708,0	-42,337737	+41,881149	+16,292417	54	243 4743,0	-43,916667	-38,507617	-22,539257	54
243 4708,5	-47,197212	+37,896979	+13,942199	54	243 4743,5	-38,773692	-42,504454	-23,974773	54
243 4709,0	-51,480545	+33,454270	+11,423456	54	243 4744,0	-33,161867	-45,997541	-25,125040	54
243 4709,5	-55,146141	+28,612514	+ 8,768603	54	243 4744,5	-27,142695	-48,937488	-25,972118	54
243 4710,0	-58,159738	+23,433317	+ 6,010407	54	243 4745,0	-20,784281	-51,279605	-26,500940	54
243 4710,5	-60,494306	+17,979987	+ 3,181812	54	243 4745,5	-14,161079	-52,984829	-26,699728	54
243 4711,0	-62,129706	+12,317030	+ 0,315695	54	243 4746,0	- 7,353439	-54,020593	-26,560384	54
243 4711,5	-63,052546	+ 6,509824	- 2,555236	54	243 4746,5	- 0,446998	-54,361940	-26,078946	54
243 4712,0	-63,256106	+ 0,624314	- 5,398628	54	243 4747,0	+ 6,468239	-53,992408	-25,255941	54
243 4712,5	-62,740187	- 5,273275	- 8,182576	54	243 4747,5	+13,299005	-52,904992	-24,096731	54
243 4713,0	-61,511157	-11,116724	-10,875792	54	243 4748,0	+19,950147	-51,102885	-22,611748	54
243 4713,5	-59,581936	-16,840122	-13,447731	54	243 4748,5	+26,326218	-48,600138	-20,816667	54
243 4714,0	-56,972147	-22,378212	-15,868778	54	243 4749,0	+32,333234	-45,422002	-18,732384	54
243 4714,5	-53,708107	-27,666781	-18,110447	54	243 4749,5	+37,880559	-41,605039	-16,384917	54
243 4715,0	-49,823030	-32,643141	-20,145608	54	243 4750,0	+42,882818	-37,196861	-13,805075	54
243 4715,5	-45,356997	-37,246645	-21,948756	54	243 4750,5	+47,261723	-32,255566	-11,028040	54
243 4716,0	-40,357075	-41,419356	-23,496334	54	243 4751,0	+50,947882	-26,848946	- 8,092802	54
243 4716,5	-34,877140	-45,106641	-24,766999	54	243 4751,5	+53,882318	-21,053274	- 5,041447	54
243 4717,0	-28,977868	-48,258059	-25,742055	54	243 4752,0	+56,017720	-14,951955	- 1,918378	54
243 4717,5	-22,726328	-50,828024	-26,405736	54	243 4752,5	+57,319509	- 8,633957	+ 1,230515	54
243 4718,0	-16,195651	-52,776772	-26,745631	54	243 4753,0	+57,766505	- 2,192143	+ 4,358748	54
243 4718,5	- 9,464415	-54,071129	-26,752997	54	243 4753,5	+57,351281	+ 4,278485	+ 7,420081	54
243 4719,0	- 2,615894	-54,685340	-26,423105	54	243 4754,0	+56,080240	+10,682538	+10,369403	54
243 4719,5	+ 4,262829	-54,601893	-25,755523	54	243 4754,5	+53,973341	+16,925952	+13,163496	54
243 4720,0	+11,081958	-53,812090	-24,754327	54	243 4755,0	+51,063692	+22,917645	+15,761821	54
243 4720,5	+17,750162	-52,316662	-23,428248	54	243 4755,5	+47,396762	+28,571073	+18,127156	54
243 4721,0	+24,175914	-50,126164	-21,790773	54	243 4756,0	+43,029416	+33,805646	+20,226211	54
243 4721,5	+30,268865	-47,261184	-19,860095	54	243 4756,5	+38,028839	+38,548032	+22,030144	54
243 4722,0	+35,941325	-43,752474	-17,659048	54	243 4757,0	+32,471201	+42,733286	+23,514975	54
243 4722,5	+41,109718	-39,640761	-15,214886	54	243 4757,5	+26,440240	+46,305818	+24,661910	54
243 4723,0	+45,696050	-34,976491	-12,559012	54	243 4758,0	+20,025676	+49,220109	+25,457556	54
243 4723,5	+49,629327	-29,819313	- 9,726602	54	243 4758,5	+13,321622	+51,441358	+25,894054	54
243 4724,0	+52,846943	-24,237420	- 6,756176	54	243 4759,0	+ 6,424851	+52,945717	+25,969055	54
243 4724,5	+55,295929	-18,306691	- 3,689044	54	243 4759,5	- 0,566881	+53,720500	+25,865648	54
243 4725,0	+56,934138	-12,109684	- 0,568733	54	243 4760,0	- 7,556495	+53,763939	+25,052088	54
243 4725,5	+57,731232	- 5,734422	+ 2,559700	54	243 4760,5	-14,449164	+53,084915	+24,081519	54
243 4726,0	+57,669650	+ 0,726919	+ 5,650387	54	243 4761,0	-21,153784	+51,702405	+22,791583	54

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z	J.D.	x	y	z
243 4761.5	-27,584250	+49,644669	+21,203891	243 4796.5	-54,169747	-27,747959	-18,196800
243 4762.0	-33,660547	+46,948406	+19,343529	243 4797.0	-50,440459	-32,731395	-20,228171
243 4762.5	-39,309664	+43,657783	+17,238501	243 4797.5	-46,140534	-37,337952	-22,027122
243 4763.0	-44,466178	+39,823298	+14,919132	243 4798.0	-41,314779	-41,512855	-23,571762
243 4763.5	-49,072798	+35,500834	+12,417565	243 4798.5	-36,013592	-45,204615	-24,842291
243 4764.0	-53,080473	+30,750471	+ 9,767170	243 4799.0	-30,292803	-48,365320	-25,821107
243 4764.5	-56,448614	+25,635622	+ 7,002131	243 4799.5	-24,213695	-50,951121	-26,493071
243 4765.0	-59,144838	+20,222017	+ 4,156963	243 4800.0	-17,842875	-52,922677	-26,845662
243 4765.5	-61,144909	+14,576954	+ 1,266167	243 4800.5	-11,252181	-54,245714	-26,869275
243 4766.0	-62,432444	+ 8,768568	- 1,636090	243 4801.0	- 4,518551	-54,891755	-26,557519
243 4766.5	-62,998512	+ 2,865207	- 4,516249	243 4801.5	+ 2,276277	-54,838839	-25,907557
243 4767.0	-62,841487	+ 3,065031	- 7,341552	243 4802.0	+ 9,046170	-54,072456	-24,920491
243 4767.5	-61,966547	- 8,954747	-10,080223	243 4802.5	+15,701211	-52,586409	-23,601729
243 4768.0	-60,385548	-14,737588	-12,701609	243 4803.0	+22,148612	-50,383961	-21,961437
243 4768.5	-58,116737	-20,348534	-15,176299	243 4803.5	+28,293858	-47,478673	-20,014821
243 4769.0	-55,184552	-25,724160	-17,476238	243 4804.0	+34,042232	-43,895392	-17,782475
243 4769.5	-51,619586	-30,802917	-19,574831	243 4804.5	+39,300695	-39,670981	-15,290531
243 4770.0	-47,458460	-35,525360	-21,447075	243 4805.0	+43,980019	-34,854709	-12,570667
243 4770.5	-42,743908	-39,834531	-23,069720	243 4805.5	+47,997194	-29,508310	- 9,659899
243 4771.0	-37,524683	-34,676219	-24,421402	243 4806.0	+51,278044	-23,705584	- 6,600152
243 4771.5	-31,855748	-46,999546	-25,482929	243 4806.5	+53,759647	-17,531319	- 3,437531
243 4772.0	-25,798168	-49,757351	-26,237464	243 4807.0	+55,392771	-11,079790	- 0,221376
243 4772.5	-19,419227	-51,906996	-26,670911	243 4807.5	+56,143709	- 4,452621	+ 2,996928
243 4773.0	-12,792237	-53,411014	-26,772223	243 4808.0	+55,995802	+ 2,243749	+ 6,165282
243 4773.5	- 5,996358	-54,238052	-26,533813	243 4808.5	+54,950006	+ 8,900893	+ 9,232285
243 4774.0	+ 0,883823	-54,363767	-25,951965	243 4809.0	+53,025000	+15,411336	+12,148624
243 4774.5	+ 7,758903	-53,771972	-25,027302	243 4809.5	+50,256284	+21,671370	+14,868347
243 4775.0	+14,535600	-52,455654	-23,765203	243 4810.0	+46,694912	+27,583663	+17,349959
243 4775.5	+21,117928	-50,417951	-22,176148	243 4810.5	+42,405498	+33,059371	+19,557264
243 4776.0	+27,408763	-47,673150	-20,276059	243 4811.0	+37,464040	+38,019855	+21,459960
243 4776.5	+33,311608	-44,247298	-18,086414	243 4811.5	+31,955476	+42,397791	+23,033955
243 4777.0	+38,732755	-40,178697	-15,634292	243 4812.0	+25,971347	+46,137909	+24,261497
243 4777.5	+43,583516	-35,517916	-12,952166	243 4812.5	+19,607447	+49,197159	+25,131020
243 4778.0	+47,782547	-30,327349	-10,077480	243 4813.0	+12,961759	+51,544586	+25,636923
243 4778.5	+51,258138	-24,680391	- 7,052022	243 4813.5	+ 6,132621	+53,160993	+25,779205
243 4779.0	+53,950337	-18,660120	- 3,921120	243 4814.0	- 0,782875	+54,038274	+25,563031
243 4779.5	+55,812606	-12,357506	- 0,732618	243 4814.5	- 7,690182	+54,178705	+24,998247
243 4780.0	+56,813175	- 5,869409	+ 2,464217	243 4815.0	-14,498411	+53,594215	+24,098942
243 4780.5	+56,935865	+ 0,703736	+ 5,619860	243 4815.5	-21,121207	+52,305514	+22,882954
243 4781.0	+56,180220	+ 7,260261	+ 8,685666	243 4816.0	-27,477473	+50,341305	+21,371413
243 4781.5	+54,561367	+13,699582	+11,614975	243 4816.5	-33,491949	+47,737463	+19,588322
243 4782.0	+52,109170	+19,924365	+14,364059	243 4817.0	-39,095651	+44,536265	+17,560113
243 4782.5	+48,867132	+25,842449	+16,892933	243 4817.5	-44,226289	+40,785676	+15,315301
243 4783.0	+44,891043	+31,368515	+19,166041	243 4818.0	-48,828516	+36,538562	+12,884069
243 4783.5	+40,247279	+36,425386	+21,152708	243 4818.5	-52,854172	+31,852023	+10,297933
243 4784.0	+35,011157	+40,945070	+22,827481	243 4819.0	-56,262486	+26,786705	+ 7,589398
243 4784.5	+29,265210	+44,869542	+24,170355	243 4819.5	-59,020148	+21,406082	+ 4,971616
243 4785.0	+23,097392	+48,151091	+25,166753	243 4820.0	-61,101346	+15,775819	+ 1,938065
243 4785.5	+16,599510	+50,752692	+25,807573	243 4820.5	-62,487852	+ 9,963128	- 0,937749
243 4786.0	+ 9,865609	+52,647999	+26,089015	243 4821.0	-63,168842	+ 4,036117	- 3,802590
243 4786.5	+ 2,990507	+53,821168	+26,012381	243 4821.5	-63,140952	- 1,936784	- 6,623777
243 4787.0	- 3,931565	+54,266721	+25,583858	243 4822.0	-62,407973	- 7,887421	- 9,369436
243 4787.5	-10,808234	+53,989033	+24,814171	243 4822.5	-60,980777	-13,748460	-12,008742
243 4788.0	-17,550117	+53,001930	+23,718275	243 4823.0	-58,877050	-19,453901	-14,512142
243 4788.5	-24,071883	+51,328115	+22,314978	243 4823.5	-56,121067	-24,939551	-16,851563
243 4789.0	-30,293165	+48,998454	+20,626531	243 4824.0	-52,743449	-30,143501	-19,000608
243 4789.5	-36,139367	+46,051300	+18,678204	243 4824.5	-48,780814	-35,006502	-20,934694
243 4790.0	-41,542349	+42,531685	+16,497853	243 4825.0	-44,275573	-39,472366	-22,631238
243 4790.5	-46,441030	+38,490547	+14,115490	243 4825.5	-39,275644	-43,488333	-24,069794
243 4791.0	-50,781717	+33,983779	+11,562801	243 4826.0	-33,834203	-47,005433	-25,232198
243 4791.5	-54,518537	+29,071488	+ 8,872749	243 4826.5	-28,009431	-49,978799	-26,102691
243 4792.0	-57,613487	+23,817050	+ 6,079110	243 4827.0	-21,864325	-52,368128	-26,668134
243 4792.5	-60,036576	+18,286329	+ 3,216102	243 4827.5	-15,466423	-54,137958	-26,918087
243 4793.0	-61,765757	+12,546895	+ 0,318011	243 4828.0	- 8,887621	-55,258251	-26,845077
243 4793.5	-62,786801	+ 6,667278	- 2,581168	243 4828.5	- 2,203871	-55,704779	-26,444752
243 4794.0	-63,093048	+ 0,716306	- 5,447996	243 4829.0	+ 4,505113	-55,459785	-25,716159
243 4794.5	-62,685224	- 5,237482	- 8,249875	243 4829.5	+11,156259	-54,512577	-24,661979
243 4795.0	-61,571173	-11,126367	-10,955266	243 4830.0	+17,663674	-52,860254	-23,288833
243 4795.5	-59,765450	-16,883902	-13,533874	243 4830.5	+23,939315	-50,508436	-21,607543
243 4796.0	-57,289189	-22,445336	-15,956823	243 4831.0	+29,893917	-47,472124	-19,633460

J.D.	x	y	z	J.D.	x	y	z		
243 4831.5	+35,438129	-43,776428	-17,386699	54	243 4866.5	+28,794727	+43,020394	+22,665712	54
243 4832.0	+40,483929	-39,457245	-14,892323	54	243 4867.0	+22,381971	+46,514430	+23,688871	54
243 4832.5	+44,946398	-34,561899	-12,180478	54	243 4867.5	+15,621519	+49,276717	+24,338793	54
243 4833.0	+48,745695	-29,149356	-9,286311	54	243 4868.0	+8,624604	+51,276831	+24,611815	54
243 4833.5	+51,809376	-23,290244	-6,249768	54	243 4868.5	+1,502507	+52,499206	+24,511206	54
243 4834.0	+54,074778	-17,066328	-3,115114	54	243 4869.0	-5,636048	+52,942246	+24,046499	54
243 4834.5	+55,491451	-10,569461	+0,069768	54	243 4869.5	-12,687002	+52,617143	+23,232745	54
243 4835.0	+56,023458	-3,900010	+3,254344	54	243 4870.0	-19,552615	+51,546437	+22,089698	54
243 4835.5	+55,651336	+2,835352	+6,386637	54	243 4870.5	-26,142620	+49,762542	+20,641001	54
243 4836.0	+54,373410	+9,526316	+9,414620	54	243 4871.0	-32,374989	+47,306166	+18,913384	54
243 4836.5	+52,206523	+16,061973	+12,287696	54	243 4871.5	-38,176342	+44,224930	+16,935985	54
243 4837.0	+49,185853	+22,333980	+14,958178	54	243 4872.0	-43,482100	+40,572036	+14,739700	54
243 4837.5	+45,363985	+28,239709	+17,382684	54	243 4872.5	-48,236361	+36,405063	+12,356651	54
243 4838.0	+40,809114	+33,685065	+19,523293	54	243 4873.0	-52,391810	+31,785071	+9,819759	54
243 4838.5	+35,602660	+38,586791	+21,348404	54	243 4873.5	-55,909399	+26,775688	+7,162356	54
243 4839.0	+29,836558	+42,874262	+22,833334	54	243 4874.0	-58,758057	+21,442430	+4,417892	54
243 4839.5	+23,610232	+46,490506	+23,960521	54	243 4874.5	-60,914378	+15,852083	+1,619686	54
243 4840.0	+17,027710	+49,392690	+24,719472	54	243 4875.0	-62,362400	+10,072242	-1,199288	54
243 4840.5	+10,194848	+51,551940	+25,106436	54	243 4875.5	-63,093343	+4,170833	-4,006586	54
243 4841.0	+3,216955	+52,952773	+25,123914	54	243 4876.0	-63,105420	-1,784271	-6,770457	54
243 4841.5	-3,803228	+53,592207	+24,780046	54	243 4876.5	-62,403620	-7,725624	-9,460006	54
243 4842.0	-10,767125	+53,478646	+24,087939	54	243 4877.0	-60,999622	-13,586589	-12,045350	54
243 4842.5	-17,581552	+52,630640	+23,064979	54	243 4877.5	-58,911662	-19,301705	-14,977799	54
243 4843.0	-24,159606	+51,075763	+21,732205	54	243 4878.0	-56,164363	-24,807061	-16,789996	54
243 4843.5	-30,421231	+48,849300	+20,113645	54	243 4878.5	-52,788746	-30,040753	-18,896132	54
243 4844.0	-36,293630	+45,993269	+18,235819	54	243 4879.0	-48,821993	-34,943290	-20,792131	54
243 4844.5	-41,711446	+42,555375	+16,127223	54	243 4879.5	-44,307324	-39,458071	-22,455834	54
243 4845.0	-46,616831	+38,588091	+13,817884	54	243 4880.0	-39,293833	-43,531896	-23,867236	54
243 4845.5	-50,959505	+34,147935	+11,339026	54	243 4880.5	-33,836213	-47,115477	-25,008694	54
243 4846.0	-54,696666	+29,294707	+8,722715	54	243 4881.0	-27,994440	-50,163936	-25,865126	54
243 4846.5	-57,792933	+24,090872	+6,001565	54	243 4881.5	-21,833448	-52,637387	-26,424254	54
243 4847.0	-60,220340	+18,601008	+3,208487	54	243 4882.0	-15,422619	-54,501366	-26,676744	54
243 4847.5	-61,958208	+12,891236	+0,376428	54	243 4882.5	-8,835363	-55,727431	-26,616459	54
243 4848.0	-62,993034	+7,028699	-2,461861	54	243 4883.0	-2,148514	-56,293631	-26,240607	54
243 4848.5	-63,318478	+1,081098	-5,274044	54	243 4883.5	+4,558303	-56,184933	-25,549875	54
243 4849.0	-62,935235	-4,883814	-8,028423	54	243 4884.0	+11,203362	-55,393649	-24,548577	54
243 4849.5	-61,850951	-10,798700	-10,694169	54	243 4884.5	+17,703592	-53,919878	-23,244762	54
243 4850.0	-60,080075	-16,597143	-13,241518	54	243 4885.0	+23,975404	-51,771805	-21,650295	54
243 4850.5	-57,643697	-22,214072	-15,641974	54	243 4885.5	+29,935577	-48,966029	-19,780906	54
243 4851.0	-54,569522	-27,586323	-17,868570	54	243 4886.0	+35,502225	-45,527818	-17,656222	54
243 4851.5	-50,891516	-32,653065	-19,896011	54	243 4886.5	+40,595821	-41,491264	-15,299732	54
243 4852.0	-46,649731	-37,356282	-21,700918	54	243 4887.0	+45,140335	-36,899427	-12,738747	54
243 4852.5	-41,890080	-41,641272	-23,262000	54	243 4887.5	+49,064437	-31,804323	-10,004277	54
243 4853.0	-36,663983	-45,457075	-24,560264	54	243 4888.0	+52,302821	-26,266842	-7,130859	54
243 4853.5	-31,028067	-48,756896	-25,579147	54	243 4888.5	+54,797621	-20,356477	-4,156302	54
243 4854.0	-25,043849	-51,498615	-26,304742	54	243 4889.0	+56,499788	-14,150805	-1,121300	54
243 4854.5	-18,777316	-53,645104	-26,725915	54	243 4889.5	+57,370668	-7,734833	+1,931005	54
243 4855.0	-12,298574	-55,164755	-26,834490	54	243 4890.0	+57,383453	-1,199981	+4,955655	54
243 4855.5	-5,681408	-56,031783	-26,625379	54	243 4890.5	+56,524543	+5,357237	+7,906612	54
243 4856.0	+0,997144	-56,226798	-26,096783	54	243 4891.0	+54,794754	+11,836831	+10,737619	54
243 4856.5	+7,657305	-55,737127	-25,250309	54	243 4891.5	+52,210272	+18,137321	+13,403219	54
243 4857.0	+14,217078	-54,557341	-24,091162	54	243 4892.0	+48,803137	+24,157989	+15,859854	54
243 4857.5	+20,592874	-52,689690	-22,628281	54	243 4892.5	+44,621228	+29,801315	+18,066975	54
243 4858.0	+26,700217	-50,144644	-20,874521	54	243 4893.0	+39,727738	+34,975560	+19,988202	54
243 4858.5	+32,454599	-46,941393	-18,846814	54	243 4893.5	+34,199942	+39,597236	+21,592341	54
243 4859.0	+37,772440	-43,108301	-16,566271	54	243 4894.0	+28,127381	+43,593373	+22,854263	54
243 4859.5	+42,572298	-38,683394	-14,058319	54	243 4894.5	+21,609600	+46,903476	+23,755581	54
243 4860.0	+46,776229	-33,714694	-11,352700	54	243 4895.0	+14,753373	+49,480868	+24,285016	54
243 4860.5	+50,311326	-28,260379	-8,483425	54	243 4895.5	+7,669799	+51,293511	+24,438495	54
243 4861.0	+53,111499	-22,388798	-5,488600	54	243 4896.0	+0,471373	+52,324260	+24,218972	54
243 4861.5	+55,119428	-16,178174	-2,410095	54	243 4896.5	-6,730822	+52,570497	+23,635998	54
243 4862.0	+56,288554	-9,715892	+0,706964	54	243 4897.0	-13,829596	+52,043182	+22,705039	54
243 4862.5	+56,585108	-3,097390	+3,814912	54	243 4897.5	-20,723717	+50,765683	+21,446731	54
243 4863.0	+55,990019	+3,357547	+6,864470	54	243 4898.0	-27,319518	+48,772239	+19,886020	54
243 4863.5	+54,500401	+10,196387	+9,805870	54	243 4898.5	-33,532012	+46,106344	+18,051294	54
243 4864.0	+52,130713	+16,657379	+12,590132	54	243 4899.0	-39,285634	+42,819150	+15,973581	54
243 4864.5	+48,913207	+22,851405	+15,170445	54	243 4899.5	-44,514509	+38,967844	+13,685760	54
243 4865.0	+44,897603	+28,675503	+17,503532	54	243 4900.0	-49,162509	+34,614254	+11,221926	54
243 4865.5	+40,150110	+34,033775	+19,550973	54	243 4900.5	-53,183042	+29,823616	+8,616817	54
243 4866.0	+34,751502	+38,840083	+21,280270	54	243 4901.0	-56,538728	+24,663493	+5,905360	54

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z		J.D.	x	y	z	
243 4901,5	-59,200992	+19,202893	+ 3,122295	54	243 4926,5	-40,238909	+41,806912	+15,350347	55
243 4902,0	-61,149499	+13,511521	+ 0,301885	54	243 4927,0	-45,358970	+37,763848	+12,978821	55
243 4902,5	-62,371868	+ 7,659245	- 2,522309	54	243 4927,5	-49,882142	+33,230942	+10,439721	55
243 4903,0	-62,863111	+ 1,715577	- 5,317607	54	243 4928,0	-53,761643	+28,276016	+ 7,768991	55
243 4903,5	-62,625328	- 4,250683	- 8,052354	54	243 4928,5	-56,960511	+22,969409	+ 5,002775	55
243 4904,0	-61,667383	-10,171777	-10,696039	54	243 4929,0	-59,451220	+17,382935	+ 2,176965	55
243 4904,5	-60,004699	-15,981294	-13,219411	54	243 4929,5	-61,215153	+11,588933	- 0,673177	55
243 4905,0	-57,659018	-21,614436	-15,594591	54	243 4930,0	-62,242140	+ 5,659578	- 3,513309	55
243 4905,5	-54,658231	-27,008321	-17,795190	54	243 4930,5	-62,529913	- 0,333745	- 6,310220	55
243 4906,0	-51,036361	-32,102311	-19,796460	54	243 4931,0	-62,083519	- 6,320893	- 9,032004	55
243 4906,5	-46,833348	-36,838350	-21,575429	54	243 4931,5	-60,914995	-12,233313	-11,648177	55
243 4907,0	-42,095037	-41,161389	-23,111099	54	243 4932,0	-59,042922	-18,004375	-14,129787	55
243 4907,5	-36,872978	-45,019811	-24,384625	54	243 4932,5	-56,492094	-23,569590	-16,449487	55
243 4908,0	-31,224331	-48,365971	-25,379555	54	243 4933,0	-53,293298	-28,866853	-18,581622	55
243 4908,5	-25,211577	-51,156684	-26,082020	54	243 4933,5	-49,483107	-33,836676	-20,502320	55
243 4909,0	-18,902261	-53,353867	-26,481019	54	243 4934,0	-45,103784	-38,422465	-22,189606	55
243 4909,5	-12,368579	-54,925143	-26,568642	54	243 4934,5	-40,203128	-42,570816	-23,623523	55
243 4910,0	- 5,686851	-55,844418	-26,340303	54	243 4935,0	-34,834412	-46,231886	-24,786303	55
243 4910,5	+ 1,063082	-56,092562	-25,794973	54	243 4935,5	-29,056235	-49,359776	-25,662524	55
243 4911,0	+ 7,798605	-55,657872	-24,935341	54	243 4936,0	-22,932436	-51,913104	-26,239359	55
243 4911,5	+14,435189	-54,536689	-23,768001	54	243 4936,5	-16,531848	-53,855511	-26,506812	55
243 4912,0	+20,887360	-52,733821	-22,303568	54	243 4937,0	- 9,928016	-55,156269	-26,457933	55
243 4912,5	+27,067938	-50,262834	-20,556690	54	243 4937,5	- 3,198796	-55,791045	-26,089165	55
243 4913,0	+32,898237	-47,146395	-18,546107	54	243 4938,0	+ 3,574223	-55,742486	-25,400530	55
243 4913,5	+38,291186	-43,416217	-16,294500	54	243 4938,5	+10,306415	-55,001046	-24,395961	55
243 4914,0	+43,170667	-39,113195	-13,828432	54	243 4939,0	+18,911014	-53,565531	-23,083450	55
243 4914,5	+47,463745	-34,287119	-11,178093	54	243 4939,5	+23,300179	-51,443782	-21,475267	55
243 4915,0	+51,103722	-28,996376	- 8,377029	54	243 4940,0	+29,386242	-48,653154	-19,588056	55
243 4915,5	+54,031470	-23,307472	- 5,461802	54	243 4940,5	+35,083024	-45,220750	-17,442814	55
243 4916,0	+56,196535	-17,294352	- 2,471558	54	243 4941,0	+40,307414	-41,183687	-15,064858	55
243 4916,5	+57,558468	-11,037620	+ 0,552463	54	243 4941,5	+44,980846	-36,588892	-12,483588	55
243 4917,0	+58,087735	- 4,623509	+ 3,567485	54	243 4942,0	+49,030933	-31,492844	- 9,732199	55
243 4917,5	+57,766831	+ 1,857247	+ 6,529844	54	243 4942,5	+52,392923	-25,960936	- 6,847246	55
243 4918,0	+56,591034	+ 8,310790	+ 9,956855	54	243 4943,0	+55,011249	-20,066709	- 3,868141	55
243 4918,5	+54,569065	+14,641640	+12,121722	54	243 4943,5	+56,840715	-13,890758	- 0,836538	55
243 4919,0	+51,723519	+20,754388	+14,666076	54	243 4944,0	+57,847664	- 7,519498	+ 2,204377	55
243 4919,5	+48,090967	+26,555522	+16,989111	54	243 4944,5	+58,010867	- 1,043748	+ 5,210595	55
243 4920,0	+43,721170	+31,955332	+19,054309	54	243 4945,0	+57,322086	+ 5,442832	+ 8,138085	55
243 4920,5	+38,679290	+36,869900	+20,829124	54	243 4945,5	+55,786481	+11,845352	+10,943567	55
243 4921,0	+33,039344	+41,222994	+22,285766	54	243 4946,0	+53,422717	+18,069390	+13,585302	55
243 4921,5	+26,888325	+44,947886	+23,401891	54	243 4946,5	+50,262751	+24,022680	+16,023860	55
243 4922,0	+20,321651	+47,988928	+24,161170	54	243 4947,0	+46,351432	+29,616787	+18,222848	55
243 4922,5	+13,441593	+50,302827	+24,553649	54	243 4947,5	+41,745728	+34,768726	+20,149579	55
243 4923,0	+ 6,354940	+51,859546	+24,575959	54	243 4948,0	+36,513809	+39,402473	+21,775679	55
243 4923,5	- 0,829510	+52,642721	+24,231233	54	243 4948,5	+30,733839	+43,450388	+23,077629	55
243 4924,0	- 8,003413	+52,649672	+23,528898	54	243 4949,0	+24,492536	+46,854451	+24,037192	55
243 4924,5	-15,061222	+51,890914	+22,484199	54	243 4949,5	+17,883545	+49,567271	+24,641714	55
243 4925,0	-21,902334	+50,389361	+21,117623	54	243 4950,0	+11,005700	+51,552949	+24,884351	55
243 4925,5	-28,432851	+48,179068	+19,454150	54	243 4950,5	+ 3,961079	+52,787594	+24,764122	55
243 4926,0	-34,566972	+45,303870	+17,522484	54	243 4951,0	- 3,146918	+53,259624	+24,285842	55
243 4926,5	-40,228073	+41,815904	+15,354257	54	243 4951,5	-10,215549	+52,969731	+23,459940	55
243 4927,0	-45,349267	+37,773984	+12,983228	54	243 4952,0	-17,144642	+51,930534	+22,302075	55
243 4927,5	-49,873699	+33,242090	+10,444568	54	243 4952,5	-23,838343	+50,165973	+20,832709	55
243 4928,0	-53,754537	+28,288082	+ 7,774236	54	243 4953,0	-30,206703	+47,710434	+19,076547	55
243 4928,5	-56,954889	+22,982140	+ 5,008310	54	243 4953,5	-36,167036	+44,607722	+17,061907	55
Epoch 1955.0					243 4954,0	-41,644954	+40,909750	+14,820043	55
243 4920,0	+43,712725	+31,965103	+19,058556	55	243 4954,5	-46,575186	+36,675292	+12,384462	55
243 4920,5	+38,669024	+36,878544	+20,832882	55	243 4955,0	-50,902014	+31,968568	+ 9,790247	55
243 4921,0	+33,027964	+41,230377	+22,288975	55	243 4955,5	-54,579523	+26,857947	+ 7,073430	55
243 4921,5	+26,876004	+44,953894	+23,404503	55	243 4956,0	-57,571597	+21,414690	+ 4,270401	55
243 4922,0	+20,308577	+47,993469	+24,163143	55	243 4956,5	-59,851663	+15,711792	+ 1,417421	55
243 4922,5	+13,427963	+50,305830	+24,554954	55	243 4957,0	-61,402383	+9,822969	- 1,449838	55
243 4923,0	+ 6,340961	+51,860966	+24,576575	55	243 4957,5	-62,215128	+ 3,821784	- 4,296627	55
243 4923,5	- 0,843630	+52,642534	+24,231152	55	243 4958,0	-62,289550	+ 2,219071	- 7,089422	55
243 4924,0	- 8,017466	+52,647882	+23,528120	55	243 4958,5	-61,632972	- 8,228379	- 9,796133	55
243 4924,5	-15,075004	+51,887547	+22,482734	55	243 4959,0	-60,259902	-14,136868	-12,386279	55
243 4925,0	-21,915648	+50,384464	+21,115494	55	243 4959,5	-58,191534	-19,877579	-14,831097	55
243 4925,5	-28,445508	+48,172712	+19,451387	55	243 4960,0	-55,455312	-25,386161	-17,103653	55
243 4926,0	-34,578799	+45,296143	+17,519124	55	243 4960,5	-52,084585	-30,601128	-19,178906	55
					243 4961,0	-48,118303	-35,464071	-21,033784	55

RECTANGULAR COORDINATES OF THE MOON 1952-1971

J.D.	x	y	z	J.D.	x	y	z		
243 4961,5	-43,600730	-39,919839	-22,647250	55	243 4996,5	+46,598205	-33,557371	-10,912644	55
243 4962,0	-38,581350	-43,916818	-24,000390	55	243 4997,0	+50,203450	-28,044592	-8,051953	55
243 4962,5	-33,114656	-47,407165	-25,076535	55	243 4997,5	+53,073483	-22,117178	-5,072601	55
243 4963,0	-27,260078	-50,347139	-25,861378	55	243 4998,0	+55,151814	-15,857342	-2,017519	55
243 4963,5	-21,081830	-52,697468	-26,343139	55	243 4998,5	+56,394133	-9,356018	+1,067553	55
243 4964,0	-14,648813	-54,423853	-26,512780	55	243 4999,0	+56,770202	-2,711190	+4,135034	55
243 4964,5	-8,034386	-55,497473	-26,364219	55	243 4999,5	+56,265243	+3,974235	+7,136580	55
243 4965,0	-1,316099	-55,895611	-25,894591	55	243 5000,0	+54,880822	+10,594865	+10,024292	55
243 4965,5	+5,424709	-55,602439	-25,104567	55	243 5000,5	+52,635256	+17,045461	+12,751967	55
243 4966,0	+12,103493	-54,609643	-23,998582	55	243 5001,0	+49,563154	+23,223576	+15,276232	55
243 4966,5	+18,633246	-52,917223	-22,585128	55	243 5001,5	+45,714597	+29,032140	+17,557673	55
243 4967,0	+24,925504	-50,534333	-20,877058	55	243 5002,0	+41,153585	+34,381725	+19,561695	55
243 4967,5	+30,891503	-47,479785	-18,891685	55	243 5002,5	+35,956137	+39,192435	+21,259212	55
243 4968,0	+36,443659	-43,782731	-16,650949	55	243 5003,0	+30,208127	+43,395389	+22,627107	55
243 4968,5	+41,497182	-39,482927	-14,181400	55	243 5003,5	+24,002980	+46,933745	+23,648490	55
243 4969,0	+45,971847	-34,630794	-11,514043	55	243 5004,0	+17,439300	+49,763215	+24,312684	55
243 4969,5	+49,793964	-29,287249	-8,684063	55	243 5004,5	+10,618662	+51,852228	+24,615102	55
243 4970,0	+52,898219	-23,523055	-5,730351	55	243 5005,0	+3,643584	+53,181817	+24,556991	55
243 4970,5	+55,229490	-17,417869	-2,694900	55	243 5005,5	-3,384368	+53,745077	+24,144996	55
243 4971,0	+56,744564	-11,058969	+0,377969	55	243 5006,0	-10,366135	+53,546606	+23,390765	55
243 4971,5	+57,413357	-4,539577	+3,442478	55	243 5006,5	-17,206554	+52,601649	+22,310420	55
243 4972,0	+57,219979	+2,043004	+6,452353	55	243 5007,0	-23,815516	+50,935320	+20,924085	55
243 4972,5	+56,163281	+8,589429	+9,361834	55	243 5007,5	-30,108880	+48,581588	+19,255341	55
243 4973,0	+54,256960	+15,000438	+12,126635	55	243 5008,0	-36,009282	+45,582417	+17,330758	55
243 4973,5	+51,529249	+21,178955	+14,704896	55	243 5008,5	-41,446689	+41,986720	+15,179351	55
243 4974,0	+48,022214	+27,032060	+17,058021	55	243 5009,0	-46,358939	+37,849504	+12,832152	55
243 4974,5	+43,790709	+32,472803	+19,151397	55	243 5009,5	-50,692027	+33,230870	+10,321709	55
243 4975,0	+38,901064	+37,421816	+20,955019	55	243 5010,0	-54,400364	+28,195117	+7,681671	55
243 4975,5	+33,429519	+41,808597	+22,443920	55	243 5010,5	-57,446917	+22,809843	+4,946344	55
243 4976,0	+27,460573	+45,572602	+23,598510	55	243 5011,0	-59,803241	+17,145074	+2,150310	55
243 4976,5	+21,085225	+48,664017	+24,404768	55	243 5011,5	-61,449477	+11,272434	-0,671965	55
243 4977,0	+14,399184	+51,044268	+24,854291	55	243 5012,0	-62,374140	+5,264308	-3,486483	55
243 4977,5	+7,501141	+52,686369	+24,944286	55	243 5012,5	-62,573991	-0,806896	-6,260051	55
243 4978,0	+0,491005	+53,574873	+24,677382	55	243 5013,0	-62,053678	-6,869488	-8,960557	55
243 4978,5	-6,531704	+53,705864	+24,061462	55	243 5013,5	-60,825509	-12,853130	-11,557270	55
243 4979,0	-13,469428	+53,086504	+23,109297	55	243 5014,0	-58,908956	-18,689452	-14,021039	55
243 4979,5	-20,228016	+51,734594	+21,838218	55	243 5014,5	-56,330245	-24,312553	-16,324503	55
243 4980,0	-26,718038	+49,677935	+20,269678	55	243 5015,0	-53,122037	-29,659531	-18,442288	55
243 4980,5	-32,855936	+46,953464	+18,428752	55	243 5015,5	-49,322830	-34,670798	-20,351106	55
243 4981,0	-38,565053	+43,606414	+16,343645	55	243 5016,0	-44,976606	-39,290504	-22,029891	55
243 4981,5	-43,776474	+39,689306	+14,045154	55	243 5016,5	-40,132414	-43,466797	-23,459903	55
243 4982,0	-48,429645	+35,260864	+11,566100	55	243 5017,0	-34,843937	-47,152098	-24,624792	55
243 4982,5	-52,472869	+30,384922	+8,940782	55	243 5017,5	-29,169147	-50,303332	-25,510670	55
243 4983,0	-55,863557	+25,129314	+6,204452	55	243 5018,0	-23,169989	-52,882159	-26,106192	55
243 4983,5	-58,568375	+19,564804	+3,392783	55	243 5018,5	-16,912068	-54,855256	-26,402641	55
243 4984,0	-60,563132	+13,764019	+0,541420	55	243 5019,0	-10,464370	-56,194500	-26,393982	55
243 4984,5	-61,832599	+7,800486	-2,314459	55	243 5019,5	-3,898998	-56,877371	-26,077023	55
243 4985,0	-62,370240	+1,747763	-5,140514	55	243 5020,0	+2,709122	-56,887188	-25,451487	55
243 4985,5	-62,177739	+4,321365	-7,903568	55	243 5020,5	+9,282541	-56,213587	-24,520202	55
243 4986,0	-61,264607	-10,335553	-10,571865	55	243 5021,0	+15,741647	-54,852945	-23,289252	55
243 4986,5	-59,647648	-16,225473	-13,115294	55	243 5021,5	+22,005141	-52,808961	-21,768192	55
243 4987,0	-57,350511	-21,924300	-15,505555	55	243 5022,0	+27,990591	-50,093159	-19,970223	55
243 4987,5	-54,403143	-27,368079	-17,716294	55	243 5022,5	+33,615233	-46,725622	-17,912440	55
243 4988,0	-50,841426	-32,496074	-19,723199	55	243 5023,0	+38,796874	-42,735519	-15,615984	55
243 4988,5	-46,706674	-37,250988	-21,504076	55	243 5023,5	+43,455096	-38,161709	-13,106196	55
243 4989,0	-42,045404	-41,579255	-23,038942	55	243 5024,0	+47,512722	-33,053272	-10,412708	55
243 4989,5	-36,908922	-45,431170	-24,310059	55	243 5024,5	+50,897500	-27,469742	-7,569394	55
243 4990,0	-31,353173	-48,761208	-25,302048	55	243 5025,0	+53,543989	-21,481140	-4,614184	55
243 4990,5	-25,438474	-51,528172	-26,001936	55	243 5025,5	+55,395770	-15,167673	-1,588740	55
243 4991,0	-19,229355	-53,695512	-26,399288	55	243 5026,0	+56,407545	-8,618913	+1,462145	55
243 4991,5	-12,794419	-55,231723	-26,486362	55	243 5026,5	+56,547304	-1,932516	+4,491312	55
243 4992,0	-6,206119	-56,110647	-26,258236	55	243 5027,0	+55,798268	+4,787619	+7,450265	55
243 4992,5	+0,459433	-56,312060	-25,713053	55	243 5027,5	+54,160359	+11,433681	+10,290352	55
243 4993,0	+7,122773	-55,822175	-24,852210	55	243 5028,0	+51,651112	+17,896693	+12,964114	55
243 4993,5	+13,701495	-54,634359	-23,680657	55	243 5028,5	+48,305894	+24,069517	+15,426640	55
243 4994,0	+20,110821	-52,749791	-22,207133	55	243 5029,0	+44,177353	+29,849941	+17,636909	55
243 4994,5	+26,264345	-50,178234	-20,444449	55	243 5029,5	+39,333973	+35,143555	+19,558964	55
243 4995,0	+32,075038	-46,938792	-18,409725	55	243 5030,0	+33,858105	+39,866341	+21,162870	55
243 4995,5	+37,456475	-43,060563	-16,124592	55	243 5030,5	+27,843367	+43,946707	+22,425395	55
243 4996,0	+42,324343	-38,583219	-13,615282	55	243 5031,0	+21,391714	+47,326844	+23,330330	55

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z	J.D.	x	y	z	
243 5031,5	+14,610512	+49,963592	+23,868594	55	243 5066,5	-62,381642	+ 5,277459 - 3,789560	55
243 5032,0	+ 7,609554	+51,828444	+24,037955	55	243 5067,0	-62,629758	- 0,756696 - 6,502688	55
243 5032,5	+ 0,498460	+52,907315	+23,842679	55	243 5067,5	-62,150244	- 6,788614 - 9,142670	55
243 5033,0	- 6,615669	+53,199581	+23,292851	55	243 5068,0	-60,956492	-12,749473 -11,680101	55
243 5033,5	-13,630141	+52,717142	+22,403784	55	243 5068,5	-59,068659	-18,572361 -14,087112	55
243 5034,0	-20,448155	+51,482995	+21,195229	55	243 5069,0	-56,513232	-24,192614 -16,337459	55
243 5034,5	-26,979941	+49,530029	+19,690711	55	243 5069,5	-53,322865	-29,548193 -18,406704	55
243 5035,0	-33,143512	+46,899597	+17,916825	55	243 5070,0	-49,536125	-34,580116 -20,272362	55
243 5035,5	-38,865174	+43,640273	+15,902612	55	243 5070,5	-45,197099	-39,232749 -21,914002	55
243 5036,0	-44,079810	+39,806646	+13,678990	55	243 5071,0	-40,355203	-43,454299 -23,313439	55
243 5036,5	-48,730998	+35,458234	+11,278264	55	243 5071,5	-35,064796	-47,197147 -24,454851	55
243 5037,0	-52,770991	+30,658482	+ 8,733652	55	243 5072,0	-29,384808	-50,418252 -25,324921	55
243 5037,5	-56,160648	+25,473882	+ 6,078916	55	243 5072,5	-23,378390	-53,079576 -25,912993	55
243 5038,0	-58,869289	+19,973169	+ 3,347999	55	243 5073,0	-17,112401	-55,148406 -26,211163	55
243 5038,5	-60,874548	+14,226614	+ 0,574710	55	243 5073,5	-10,656979	-56,597747 -26,214415	55
243 5039,0	-62,162141	+ 8,305325	- 2,207547	55	243 5074,0	- 4,084994	-57,406662 -25,920708	55
243 5039,5	-62,725662	+ 2,280636	- 4,966045	55	243 5074,5	+ 2,528497	-57,560503 -25,331027	55
243 5040,0	-62,566446	- 3,776472	- 7,668978	55	243 5075,0	+ 9,106826	-57,051292 -24,449502	55
243 5040,5	-61,693153	- 9,795942	-10,285681	55	243 5075,5	+15,572337	-55,877919 -23,283419	55
243 5041,0	-60,121723	-15,709195	-12,786871	55	243 5076,0	+21,847011	-54,046356 -21,843254	55
243 5041,5	-57,874859	-21,449613	-15,144816	55	243 5076,5	+27,853161	-51,569893 -20,142723	55
243 5042,0	-54,981846	-26,953059	-17,333548	55	243 5077,0	+33,514130	-48,469278 -18,198766	55
243 5042,5	-51,478208	-32,158356	-19,329049	55	243 5077,5	+38,755053	-44,772905 -16,031540	55
243 5043,0	-47,405238	-37,007677	-21,109375	55	243 5078,0	+43,503598	-40,516831 -13,664371	55
243 5043,5	-42,809718	-41,447010	-22,654851	55	243 5078,5	+47,690908	-35,744984 -11,123751	55
243 5044,0	-37,743415	-45,426485	-23,948154	55	243 5079,0	+51,252535	-30,509149 - 8,439214	55
243 5044,5	-32,262729	-48,900757	-24,974454	55	243 5079,5	+54,129421	-24,868897 - 5,643228	55
243 5045,0	-26,428231	-51,829307	-25,721510	55	243 5080,0	+56,269121	-18,891523 - 2,771033	55
243 5045,5	-20,304226	-54,176688	-26,179736	55	243 5080,5	+57,626996	-12,651720 + 0,139626	55
243 5046,0	-13,958376	-55,912892	-26,342321	55	243 5081,0	+58,167590	- 6,231164 + 3,048817	55
243 5046,5	- 7,461210	-57,013494	-26,205244	55	243 5081,5	+57,865986	+ 0,282199 + 5,914883	55
243 5047,0	- 0,885777	-57,460019	-25,767408	55	243 5082,0	+56,709223	+ 6,795122 + 8,695008	55
243 5047,5	+5,692835	-57,240147	-25,030678	55	243 5082,5	+54,697646	+13,210348 +11,345940	55
243 5048,0	+12,197903	-56,347971	-23,999952	55	243 5083,0	+51,846036	+19,428294 +13,824831	55
243 5048,5	+18,551559	-54,784414	-22,683317	55	243 5083,5	+48,184541	+25,349052 +16,090247	55
243 5049,0	+24,675261	-52,557372	-21,092043	55	243 5084,0	+43,759114	+30,874749 +18,103250	55
243 5049,5	+30,490390	-49,682227	-19,240772	55	243 5084,5	+38,631450	+35,912118 +19,828537	55
243 5050,0	+35,918903	-46,182149	-17,147571	55	243 5085,0	+32,878245	+40,375198 +21,235557	55
243 5050,5	+40,884100	-42,088507	-14,834053	55	243 5085,5	+26,589823	+44,187982 +22,299577	55
243 5051,0	+45,311598	-37,441265	-12,325439	55	243 5086,0	+19,868016	+47,286788 +23,002491	55
243 5051,5	+49,130389	-32,289276	- 9,650606	55	243 5086,5	+12,823480	+49,622204 +23,333442	55
243 5052,0	+52,274164	-26,690545	- 6,842048	55	243 5087,0	+ 5,572626	+51,160469 +23,289114	55
243 5052,5	+54,682818	-20,712329	- 3,935791	55	243 5087,5	- 1,765728	+51,884107 +22,873680	55
243 5053,0	+56,304151	-14,430975	- 0,971140	55	243 5088,0	- 9,073649	+51,791851 +22,098439	55
243 5053,5	+57,095651	- 7,931479	+ 2,009696	55	243 5088,5	-16,237127	+50,897872 +20,981169	55
243 5054,0	+57,026484	- 1,306673	+ 4,962157	55	243 5089,0	-23,148727	+49,230584 +19,545316	55
243 5054,5	+56,079326	+ 5,344070	+ 7,840095	55	243 5089,5	-29,709664	+46,830793 +17,818975	55
243 5055,0	+54,252085	+11,916605	+10,596732	55	243 5090,0	-35,831367	+43,749887 +15,833923	55
243 5055,5	+51,559212	+18,304267	+13,185797	55	243 5090,5	-41,436362	+40,047684 +13,624562	55
243 5056,0	+48,032639	+24,400559	+15,562817	55	243 5091,0	-46,458736	+35,790517 +11,227043	55
243 5056,5	+43,721820	+30,102133	+17,686458	55	243 5091,5	-50,844192	+31,049405 + 8,678422	55
243 5057,0	+38,693151	+35,311896	+19,519858	55	243 5092,0	-54,549663	+25,898394 + 6,015981	55
243 5057,5	+33,028480	+39,941990	+21,031798	55	243 5092,5	-57,542836	+20,413211 + 3,276662	55
243 5058,0	+26,822918	+43,916494	+22,197723	55	243 5093,0	-59,801463	+14,670118 + 0,496635	55
243 5058,5	+20,181952	+47,173508	+23,000357	55	243 5093,5	-61,312706	+ 8,745033 - 2,289030	55
243 5059,0	+13,218238	+49,666630	+23,430070	55	243 5094,0	-62,072345	+ 2,712793 - 5,046624	55
243 5059,5	+ 6,048146	+51,365565	+23,484798	55	243 5094,5	-62,084222	- 3,353351 - 7,743946	55
243 5060,0	- 1,211478	+52,256179	+23,169744	55	243 5095,0	-61,359533	- 9,382184 -10,350452	55
243 5060,5	- 8,446347	+52,339697	+22,496733	55	243 5095,5	-59,916353	-15,304849 -12,837336	55
243 5061,0	-15,547270	+51,631524	+21,483424	55	243 5096,0	-57,779181	-21,055116 -15,177609	55
243 5061,5	-22,412165	+50,159735	+20,152436	55	243 5096,5	-54,978501	-26,569598 -17,346159	55
243 5062,0	-28,947527	+47,963253	+18,530399	55	243 5097,0	-51,550573	-31,788027 -19,319842	55
243 5062,5	-35,069402	+45,090113	+16,647070	55	243 5097,5	-47,537017	-36,653444 -21,077528	55
243 5063,0	-40,703869	+41,595666	+14,534498	55	243 5098,0	-42,984669	-41,112491 -22,600223	55
243 5063,5	-45,787265	+37,541056	+12,226299	55	243 5098,5	-37,945317	-45,115714 -23,871166	55
243 5064,0	-50,266017	+32,991715	+ 9,757019	55	243 5099,0	-32,475439	-48,617874 -24,875948	55
243 5064,5	-54,096430	+28,016190	+ 7,161616	55	243 5099,5	-26,635938	-51,578310 -25,602644	55
243 5065,0	-57,244214	+22,685056	+ 4,475026	55	243 5100,0	-20,491859	-53,961361 -26,041977	55
243 5065,5	-59,684123	+17,070090	+ 1,731825	55	243 5100,5	-14,111989	-55,736764 -26,187438	55
243 5066,0	-61,399471	+11,243531	- 1,034056	55	243 5101,0	- 7,568443	-56,880060 -26,035446	55

J.D.	x	y	z	J.D.	x	y	z		
243 5101,5	- 0,936154	-57,373059	-25,585485	55	243 5136,5	+57,745230	+ 6,830153	+ 8,754079	55
243 5102,0	+ 5,707717	-57,204236	-24,840230	55	243 5137,0	+55,984741	+13,170500	+11,389443	55
243 5102,5	+12,284444	-56,369101	-23,805644	55	243 5137,5	+53,418027	+19,316630	+13,858491	55
243 5103,0	+18,714494	-54,870563	-22,491056	55	243 5138,0	+50,074983	+25,178457	+16,124343	55
243 5103,5	+24,918315	-52,719114	-20,909169	55	243 5138,5	+45,997919	+30,668856	+18,152671	55
243 5104,0	+30,817251	-49,933163	-19,076109	55	243 5139,0	+41,241132	+35,705207	+19,912342	55
243 5104,5	+36,334457	-46,539054	-17,011354	55	243 5139,5	+35,870277	+40,210928	+21,376021	55
243 5105,0	+41,395819	-42,571074	-14,737623	55	243 5140,0	+29,961487	+44,116945	+22,520750	55
243 5105,5	+45,931032	-38,071464	-12,280787	55	243 5140,5	+23,600245	+47,363137	+23,328455	55
243 5106,0	+49,874494	-33,090145	- 9,669659	55	243 5141,0	+16,880008	+49,899615	+23,786384	55
243 5106,5	+53,166411	-27,684540	- 6,935786	55	243 5141,5	+ 9,900587	+51,687840	+23,887440	55
243 5107,0	+55,753735	-21,919129	- 4,113180	55	243 5142,0	+ 2,766285	+52,701495	+23,630380	55
243 5107,5	+57,591202	-15,865001	- 1,237989	55	243 5142,5	- 4,416085	+52,927203	+23,019926	55
243 5108,0	+58,642296	- 9,599229	+ 1,651860	55	243 5143,0	-11,539357	+52,364758	+22,066661	55
243 5108,5	+58,880240	- 3,204152	+ 4,517088	55	243 5143,5	-18,498188	+51,027122	+20,786802	55
243 5109,0	+58,288922	+ 3,233512	+ 7,317549	55	243 5144,0	-25,191194	+48,940050	+19,201838	55
243 5109,5	+56,863723	+ 9,623716	+10,012780	55	243 5144,5	-31,522970	+46,141314	+17,337958	55
243 5110,0	+54,612295	+15,874276	+12,562615	55	243 5145,0	-37,405851	+42,679580	+15,225408	55
243 5110,5	+51,555221	+21,892309	+14,927882	55	243 5145,5	-42,761441	+38,613121	+12,897742	55
243 5111,0	+47,726400	+27,585812	+17,071140	55	243 5146,0	-47,521715	+34,008180	+10,391016	55
243 5111,5	+43,173260	+32,865434	+18,957497	55	243 5146,5	-51,629854	+28,937373	+ 7,742975	55
243 5112,0	+37,956549	+37,646397	+20,555439	55	243 5147,0	-55,040542	+23,477902	+ 4,992234	55
243 5112,5	+32,149889	+41,850544	+21,837694	55	243 5147,5	-57,720098	+17,709958	+ 2,177577	55
243 5113,0	+25,838685	+45,408314	+22,781990	55	243 5148,0	-59,646146	+11,715135	- 0,662723	55
243 5113,5	+19,118742	+48,260752	+23,371821	55	243 5148,5	-60,807170	+ 5,575097	- 3,491452	55
243 5114,0	+12,094308	+50,361164	+23,596973	55	243 5149,0	-61,201805	- 0,629641	- 6,272915	55
243 5114,5	+ 4,875746	+51,676558	+23,453942	55	243 5149,5	-60,838023	- 6,820659	- 8,973282	55
243 5115,0	- 2,423102	+52,188611	+22,946076	55	243 5150,0	-59,732332	-12,922423	-11,560849	55
243 5115,5	- 9,687739	+51,894035	+22,083474	55	243 5150,5	-57,908949	-18,862869	-14,006219	55
243 5116,0	-16,805836	+50,804506	+20,882654	55	243 5151,0	-55,398942	-24,573810	-16,282397	55
243 5116,5	-23,669929	+48,945973	+19,365983	55	243 5151,5	-52,239523	-29,991248	-18,364845	55
243 5117,0	-30,179759	+46,357381	+17,560867	55	243 5152,0	-48,473429	-35,055575	-20,231530	55
243 5117,5	-36,244272	+43,089248	+15,498918	55	243 5152,5	-44,148331	-39,711690	-21,862886	55
243 5118,0	-41,783026	+39,201698	+13,214948	55	243 5153,0	-39,316364	-43,909088	-23,241833	55
243 5118,5	-46,727142	+34,762556	+10,746010	55	243 5153,5	-34,033784	-47,601987	-24,353779	55
243 5119,0	-51,019782	+29,845385	+ 8,130486	55	243 5154,0	-28,360611	-50,749376	-25,186616	55
243 5119,5	-54,616168	+24,527614	+ 5,407262	55	243 5154,5	-22,360393	-53,315143	-25,730744	55
243 5120,0	-57,483225	+18,888843	+ 2,615001	55	243 5155,0	-16,099986	-55,268329	-25,979156	55
243 5120,5	-59,599008	+13,009389	- 0,208441	55	243 5155,5	- 9,649323	-56,583323	-25,927512	55
243 5121,0	-60,952004	+ 6,969113	- 3,026475	55	243 5156,0	- 3,081165	-57,240124	-25,574212	55
243 5121,5	-61,540272	+ 0,846404	- 5,804117	55	243 5156,5	+ 3,529163	-57,224810	-24,920589	55
243 5122,0	-61,370546	- 5,282531	- 8,508244	55	243 5157,0	+10,104143	-56,529902	-23,971019	55
243 5122,5	-60,457514	-11,344218	-11,107744	55	243 5157,5	+16,564511	-55,154834	-22,733094	55
243 5123,0	-58,823010	-17,268326	-13,573629	55	243 5158,0	+22,829855	-53,106512	-21,217797	55
243 5123,5	-56,495377	-22,987944	-15,879086	55	243 5158,5	+28,819379	-50,399849	-19,439668	55
243 5124,0	-53,508870	-28,439782	-17,999502	55	243 5159,0	+34,452782	-47,058136	-17,416878	55
243 5124,5	-49,903207	-33,564314	-19,912484	55	243 5159,5	+39,651372	-43,113532	-15,171332	55
243 5125,0	-45,723158	-38,305917	-21,597891	55	243 5160,0	+44,339296	-38,607282	-12,728647	55
243 5125,5	-41,018251	-42,611302	-23,037847	55	243 5160,5	+48,444992	-33,589853	-10,118065	55
243 5126,0	-35,842499	-46,438250	-24,216793	55	243 5161,0	+51,902658	-28,120780	- 7,372239	55
243 5126,5	-30,254162	-49,738654	-25,121557	55	243 5161,5	+54,653834	-22,268269	- 4,526909	55
243 5127,0	-24,315529	-52,475906	-25,741427	55	243 5162,0	+56,648938	-16,108518	- 1,620448	55
243 5127,5	-18,092743	-54,616715	-26,068304	55	243 5162,5	+57,848781	- 9,724758	+ 1,306710	55
243 5128,0	-11,655469	-56,133062	-26,096778	55	243 5163,0	+58,225795	- 3,205956	+ 4,212751	55
243 5128,5	- 5,076640	-57,002734	-25,824340	55	243 5163,5	+57,765106	+ 3,354700	+ 7,055267	55
243 5129,0	+ 1,567973	-57,209700	-25,251498	55	243 5164,0	+56,465270	+ 9,861526	+ 9,792062	55
243 5129,5	+ 8,200237	-56,744588	-24,381953	55	243 5164,5	+54,338661	+16,218208	+12,382042	55
243 5130,0	+14,740295	-55,605265	-23,222774	55	243 5165,0	+51,411466	+22,329734	+14,786030	55
243 5130,5	+21,107265	-53,797127	-21,784462	55	243 5165,5	+47,723319	+28,104282	+16,967584	55
243 5131,0	+27,220150	-51,333709	-20,081137	55	243 5166,0	+43,326631	+33,455067	+18,893729	55
243 5131,5	+32,998800	-48,236844	-18,130500	55	243 5166,5	+38,285537	+38,302014	+20,535594	55
243 5132,0	+38,365018	-44,536966	-15,953869	55	243 5167,0	+32,674623	+42,573211	+21,868922	55
243 5132,5	+43,243772	-40,273173	-13,576077	55	243 5167,5	+26,577476	+46,206209	+22,874498	55
243 5133,0	+47,564421	-35,493127	-11,025296	55	243 5168,0	+20,085073	+49,149071	+23,538446	55
243 5133,5	+51,262012	-30,252788	- 8,332808	55	243 5168,5	+13,294001	+51,361088	+23,852367	55
243 5134,0	+54,278547	-24,615960	- 5,532668	55	243 5169,0	+ 6,304727	+52,813354	+23,813437	55
243 5134,5	+56,564190	-18,653646	- 2,661295	55	243 5169,5	- 7,802101	+53,489084	+23,424342	55
243 5135,0	+58,078354	-12,443192	+ 0,243018	55	243 5170,0	- 7,857985	+53,383643	+22,693134	55
243 5135,5	+58,790752	- 6,067309	+ 3,140632	55	243 5170,5	-14,827211	+52,504370	+21,632975	55
243 5136,0	+58,682185	+ 0,387086	+ 5,991153	55	243 5171,0	-21,589612	+50,870301	+20,261851	55

RECTANGULAR COORDINATES OF THE MOON 1952-1971

19

J.D.	x	y	z	J.D.	x	y	z		
243 5171,5	-28,051590	+48,511518	+18,602134	55	243 5206,5	-49,765613	-33,633951	-19,293348	55
243 5172,0	-34,125643	+45,468377	+16,680101	55	243 5207,0	-45,579228	-38,485591	-20,984885	55
243 5172,5	-39,731677	+41,790645	+14,525420	55	243 5207,5	-40,878747	-42,896929	-22,435916	55
243 5173,0	-44,798083	+37,536338	+12,170555	55	243 5208,0	-35,720561	-46,819838	-23,631152	55
243 5173,5	-49,262606	+32,770556	+ 9,650132	55	243 5208,5	-30,164944	-50,211503	-24,558002	55
243 5174,0	-53,073039	+27,564148	+ 7,000324	55	243 5209,0	-24,275562	-53,034638	-25,206599	55
243 5174,5	-56,187621	+21,992388	+ 4,258208	55	243 5209,5	-18,118949	-55,257546	-25,569785	55
243 5175,0	-58,575244	+16,133611	+ 1,461149	55	243 5210,0	-11,764065	-56,854243	-25,643119	55
243 5175,5	-60,215362	+10,067863	- 1,353769	55	243 5210,5	- 5,281908	-57,804535	-25,424863	55
243 5176,0	-61,097799	+ 3,875693	- 4,150276	55	243 5211,0	+ 1,254888	-58,094097	-24,915985	55
243 5176,5	-61,222275	- 2,363030	- 6,893373	55	243 5211,5	+ 7,772360	-57,714712	-24,120218	55
243 5177,0	-60,597852	- 8,570124	- 9,549714	55	243 5212,0	+14,195588	-56,664255	-23,044029	55
243 5177,5	-59,242281	-14,669964	-12,087946	55	243 5212,5	+20,449046	-54,947135	-21,696765	55
243 5178,0	-57,181214	-20,590218	-14,478930	55	243 5213,0	+26,456999	-52,574378	-20,090652	55
243 5178,5	-54,447492	-26,262403	-16,695933	55	243 5213,5	+32,143966	-49,564039	-18,240919	55
243 5179,0	-51,080421	-31,622387	-18,714757	55	243 5214,0	+37,435305	-45,941559	-16,165891	55
243 5179,5	-47,124956	-36,610641	-20,513792	55	243 5214,5	+42,257900	-41,740097	-13,887080	55
243 5180,0	-42,631104	-41,172505	-22,074048	55	243 5215,0	+46,541020	-37,000951	-11,429249	55
243 5180,5	-37,653352	-45,258377	-23,379204	55	243 5215,5	+50,217341	-31,773825	- 8,820463	55
243 5181,0	-32,250094	-48,823763	-24,415553	55	243 5216,0	+53,224182	-26,117096	- 6,092052	55
243 5181,5	-26,483210	-51,829417	-25,172031	55	243 5216,5	+55,504931	-20,097884	- 3,278509	55
243 5182,0	-20,417660	-54,241333	-25,640173	55	243 5217,0	+57,010623	-13,791878	- 0,417265	55
243 5182,5	-14,121199	-56,030931	-25,814155	55	243 5217,5	+57,701708	- 7,282900	+ 2,451678	55
243 5183,0	- 7,664075	-57,175157	-25,690814	55	243 5218,0	+57,549821	- 0,662074	+ 5,286284	55
243 5183,5	- 1,118756	-57,656665	-25,269703	55	243 5218,5	+56,539536	+ 5,973438	+ 8,043192	55
243 5184,0	+ 5,440324	-57,464018	-24,553137	55	243 5219,0	+54,669850	+12,522138	+10,678595	55
243 5184,5	+11,937064	-56,592032	-23,546321	55	243 5219,5	+51,955439	+18,880320	+13,149290	55
243 5185,0	+18,294056	-55,042155	-22,257479	55	243 5220,0	+48,427352	+24,944563	+15,413803	55
243 5185,5	+24,433013	-52,822869	-20,697969	55	243 5220,5	+44,133065	+30,614461	+17,433584	55
243 5186,0	+30,275355	-49,950127	-18,882450	55	243 5221,0	+39,135982	+35,795471	+19,174175	55
243 5186,5	+35,742892	-46,447884	-16,829000	55	243 5221,5	+33,514043	+40,401591	+20,606219	55
243 5187,0	+40,758759	-42,348563	-14,559265	55	243 5222,0	+27,357873	+44,357859	+21,706376	55
243 5187,5	+45,248476	-37,693446	-12,098502	55	243 5222,5	+20,768208	+47,602238	+22,457853	55
243 5188,0	+49,141212	-32,532962	- 9,475583	55	243 5223,0	+13,853148	+50,087089	+22,850781	55
243 5188,5	+52,371361	-26,926871	- 6,722931	55	243 5223,5	+ 6,725122	+51,779938	+22,882253	55
243 5189,0	+54,880099	-20,944083	- 3,876272	55	243 5224,0	- 0,502057	+52,663572	+22,556058	55
243 5189,5	+56,617170	-14,662240	- 0,974296	55	243 5224,5	- 7,715937	+52,735690	+21,882279	55
243 5190,0	+57,542652	- 8,166924	+ 1,941877	55	243 5225,0	-14,807849	+52,008026	+20,876666	55
243 5190,5	+57,628641	- 1,550477	+ 4,829352	55	243 5225,5	-21,674918	+50,505122	+19,559906	55
243 5191,0	+56,860684	+ 5,089586	+ 7,644313	55	243 5226,0	-28,221662	+48,262933	+17,956882	55
243 5191,5	+55,239043	+11,652513	+10,342963	55	243 5226,5	-34,361158	+45,327303	+16,095878	55
243 5192,0	+52,779242	+18,036539	+12,882569	55	243 5227,0	-40,015860	+41,752442	+14,007868	55
243 5192,5	+49,512384	+24,141295	+15,222517	55	243 5227,5	-45,118047	+37,599403	+11,725791	55
243 5193,0	+45,484757	+29,870263	+17,325359	55	243 5228,0	-49,610109	+32,934729	+ 9,283950	55
243 5193,5	+40,756854	+35,133139	+19,157732	55	243 5228,5	-53,444546	+27,829154	+ 6,717452	55
243 5194,0	+35,402005	+39,847989	+20,691167	55	243 5229,0	-56,583883	+22,356435	+ 4,061720	55
243 5194,5	+29,504534	+43,943079	+21,902706	55	243 5229,5	-59,000381	+16,592295	+ 1,352049	55
243 5195,0	+23,157610	+47,358291	+22,775301	55	243 5230,0	-60,675832	+10,613509	- 1,376758	55
243 5195,5	+16,460966	+50,046099	+23,298027	55	243 5230,5	-61,601224	+ 4,497045	- 4,090721	55
243 5196,0	+ 9,518557	+51,972151	+23,466091	55	243 5231,0	-61,776286	- 1,680720	- 6,756994	55
243 5196,5	+ 2,436306	+53,115387	+23,280677	55	243 5231,5	-61,209137	- 7,844686	- 9,344103	55
243 5197,0	- 4,680040	+53,467865	+22,748645	55	243 5232,0	-59,915897	-13,921692	-11,822212	55
243 5197,5	-11,726829	+53,034241	+21,882136	55	243 5232,5	-57,920161	-19,841088	-14,163301	55
243 5198,0	-18,604179	+51,831024	+20,698063	55	243 5233,0	-55,252582	-25,535297	-16,341385	55
243 5198,5	-25,217442	+49,885766	+19,217633	55	243 5233,5	-51,950356	-30,940311	-18,332659	55
243 5199,0	-31,478417	+47,236003	+17,465749	55	243 5234,0	-48,056692	-35,996134	-20,115646	55
243 5199,5	-37,306320	+43,928162	+15,470461	55	243 5234,5	-43,620330	-40,647202	-21,671337	55
243 5200,0	-42,628652	+40,016587	+13,262434	55	243 5235,0	-38,694925	-48,842716	-22,983251	55
243 5200,5	-47,381698	+35,562219	+10,874344	55	243 5235,5	-33,338578	-48,536974	-24,037544	55
243 5201,0	-51,511108	+30,631651	+ 8,340395	55	243 5236,0	-27,613252	-51,689661	-24,823077	55
243 5201,5	-54,972084	+25,295884	+ 5,695763	55	243 5236,5	-21,584228	-54,266035	-25,331433	55
243 5202,0	-57,729555	+19,629254	+ 2,976124	55	243 5237,0	-15,319539	-56,237103	-25,556953	55
243 5202,5	-59,758278	+13,708405	+ 0,217184	55	243 5237,5	- 8,889506	-57,579805	-25,496739	55
243 5203,0	-61,042621	+ 7,611196	- 2,545780	55	243 5238,0	- 2,366200	-58,277136	-25,150683	55
243 5203,5	-61,576418	+ 1,415728	- 5,278299	55	243 5238,5	+ 4,177038	-58,318200	-24,521419	55
243 5204,0	-61,362681	- 4,800557	- 7,947108	55	243 5239,0	+10,666050	-57,698388	-23,614371	55
243 5204,5	-60,413084	-10,961785	-10,520472	55	243 5239,5	+17,026328	-56,419435	-22,437713	55
243 5205,0	-58,747560	-16,994403	-12,968474	55	243 5240,0	+23,183463	-54,489540	-21,002386	55
243 5205,5	-56,393668	-22,827880	-15,263266	55	243 5240,5	+29,063615	-51,923508	-19,322110	55
243 5206,0	-53,386004	-28,395311	-17,379270	55	243 5241,0	+34,594020	-48,742896	-17,131387	55

J.D.	x	y	z	J.D.	x	y	z		
243 5241,5	+39,703531	-44,976211	-15,295547	55	243 5276,5	+32,170967	+41,437845	+20,919050	55
243 5242,0	+44,323209	-40,659052	-12,990731	55	243 5277,0	+25,767961	+45,042188	+21,813075	55
243 5242,5	+48,387039	-35,834322	-10,523914	55	243 5277,5	+18,945389	+47,921616	+22,355552	55
243 5243,0	+51,832827	-30,552475	-7,922921	55	243 5278,0	+11,812477	+50,024699	+22,535526	55
243 5243,5	+54,603047	-24,871527	-5,218346	55	243 5278,5	+4,485685	+51,315190	+22,349263	55
243 5244,0	+56,646082	-18,857207	-2,443490	55	243 5279,0	-2,914466	+51,773203	+21,800401	55
243 5244,5	+57,917409	-12,582786	+0,365826	55	243 5279,5	-10,266790	+51,395749	+20,899868	55
243 5245,0	+58,381033	-6,128821	+3,171523	55	243 5280,0	-17,452792	+50,196457	+19,665405	55
243 5245,5	+58,011051	+0,417401	+5,933645	55	243 5280,5	-24,359790	+48,204660	+18,120867	55
243 5246,0	+56,793166	+6,962756	+8,610909	55	243 5281,0	-30,883557	+45,463821	+16,295293	55
243 5246,5	+54,726292	+13,409553	+11,161397	55	243 5281,5	-36,930456	+42,029666	+14,221879	55
243 5247,0	+51,823853	+19,657225	+13,543409	55	243 5282,0	-42,418862	+37,967872	+11,936867	55
243 5247,5	+48,114826	+25,604426	+15,716478	55	243 5282,5	-47,280031	+33,351837	+9,478482	55
243 5248,0	+43,644425	+31,151538	+17,642504	55	243 5283,0	-51,458396	+28,260459	+6,885976	55
243 5248,5	+38,473987	+36,203387	+19,286895	55	243 5283,5	-54,911365	+22,776076	+4,198761	55
243 5249,0	+32,680357	+40,672163	+20,619771	55	243 5284,0	-57,608825	+16,982692	+1,455695	55
243 5249,5	+26,354324	+44,480120	+21,616947	55	243 5284,5	-59,532338	+10,964468	-1,305463	55
243 5250,0	+19,598555	+47,562197	+22,260858	55	243 5285,0	-60,674360	+4,804516	-4,048503	55
243 5250,5	+12,524737	+49,867949	+22,541092	55	243 5285,5	-61,037204	-1,416066	-6,739077	55
243 5251,0	+5,250394	+51,362944	+22,454665	55	243 5286,0	-60,632125	-7,618936	-9,344904	55
243 5251,5	-2,104492	+52,029445	+22,005987	55	243 5286,5	-59,478528	-13,729035	-11,835931	55
243 5252,0	-9,420849	+51,866269	+21,206457	55	243 5287,0	-57,603072	-19,675006	-14,184419	55
243 5252,5	-16,583570	+50,888002	+20,073826	55	243 5287,5	-55,039009	-25,389481	-16,364986	55
243 5253,0	-23,484165	+49,123708	+18,631375	55	243 5288,0	-51,825570	-30,809328	-18,354664	55
243 5253,5	-30,022865	+46,615224	+16,906976	55	243 5288,5	-48,007327	-35,875797	-20,132892	55
243 5254,0	-36,110112	+43,415154	+14,932090	55	243 5289,0	-43,633857	-40,534756	-21,681575	55
243 5254,5	-41,667535	+39,584869	+12,740805	55	243 5289,5	-38,759166	-44,736787	-22,985081	55
243 5255,0	-46,628452	+35,192601	+10,368981	55	243 5290,0	-33,441388	-48,437429	-24,030300	55
243 5255,5	-50,937928	+30,311572	+7,853427	55	243 5290,5	-27,742334	-51,597313	-24,806664	55
243 5256,0	-54,552573	+25,018376	+5,231255	55	243 5291,0	-21,727142	-54,182409	-25,306217	55
243 5256,5	-57,440059	+19,391582	+2,539294	55	243 5291,5	-15,463872	-56,164238	-25,523659	55
243 5257,0	-59,578640	+13,510541	-0,186336	55	243 5292,0	-9,023080	-57,520091	-25,456401	55
243 5257,5	-60,956410	+7,454389	-2,910612	55	243 5292,5	-2,477378	-58,233319	-25,104647	55
243 5258,0	-61,570783	+1,301244	-5,599863	55	243 5293,0	+4,099056	-58,293528	-24,471403	55
243 5258,5	-61,427724	-4,872464	-8,222018	55	243 5293,5	+10,631106	-57,696790	-23,562552	55
243 5259,0	-60,541223	-10,992565	-10,746764	55	Epoch 1956.0				
243 5259,5	-58,932702	-16,987614	-13,145709	55	243 5285,0	-60,675039	+4,790955	-4,054399	56
243 5260,0	-56,630485	-22,789293	-15,392488	55	243 5285,5	-61,036231	+1,429708	-6,745008	56
243 5260,5	-53,669271	-28,332780	-17,462873	55	243 5286,0	-60,629513	-7,632487	-9,350796	56
243 5261,0	-50,089747	-33,557108	-19,334887	55	243 5286,5	-59,474307	-13,742329	-11,841710	56
243 5261,5	-45,938041	-38,405456	-20,988879	55	243 5287,0	-57,597294	-19,687880	-14,190016	56
243 5262,0	-41,265315	-42,825472	-22,407615	55	243 5287,5	-55,031743	-25,401781	-16,370334	56
243 5262,5	-36,127306	-46,769542	-23,576344	55	243 5288,0	-51,816899	-30,820910	-18,359699	56
243 5263,0	-30,583910	-50,195126	-24,482911	55	243 5288,5	-47,997351	-35,886525	-20,137557	56
243 5263,5	-24,698652	-53,064939	-25,117769	55	243 5289,0	-43,622689	-40,544507	-21,685815	56
243 5264,0	-18,538273	-55,347305	-25,474102	55	243 5289,5	-38,746933	-44,745448	-22,988847	56
243 5264,5	-12,172195	-57,016344	-25,547834	55	243 5290,0	-33,428226	-48,444902	-24,033549	56
243 5265,0	-5,672010	-58,052174	-25,337668	55	243 5290,5	-27,728390	-51,603512	-24,809360	56
243 5265,5	+0,889055	-58,441164	-24,845152	55	243 5291,0	-21,712572	-54,187263	-25,308328	56
243 5266,0	+7,436698	-58,176003	-24,074640	55	243 5291,5	-15,448838	-56,167692	-25,525162	56
243 5266,5	+13,896094	-57,255940	-23,033342	55	243 5292,0	-9,007750	-57,522105	-25,457278	56
243 5267,0	+20,192463	-55,686760	-21,731255	55	243 5292,5	-2,461923	-58,233870	-25,104888	56
243 5267,5	+26,251651	-53,480973	-20,181188	55	243 5293,0	+4,114481	-58,292608	-24,471005	56
243 5268,0	+32,000733	-50,657852	-18,398713	55	243 5293,5	+10,646290	-57,694412	-23,561519	56
243 5268,5	+37,368610	-47,243470	-16,402121	55	243 5294,0	+17,057934	-56,442133	-22,385220	56
243 5269,0	+42,286642	-43,270702	-14,212363	55	243 5294,5	+23,274051	-54,545446	-20,953795	56
243 5269,5	+46,689319	-38,779286	-11,853004	55	243 5295,0	+29,220205	-52,021018	-19,281811	56
243 5270,0	+50,514975	-33,815776	-9,350140	55	243 5295,5	+34,823580	-48,892591	-17,386681	56
243 5270,5	+53,706467	-28,433467	-6,732275	55	243 5296,0	+40,013734	-45,190968	-15,288588	56
243 5271,0	+56,212123	-22,692395	-4,030246	55	243 5296,5	+44,723377	-40,953981	-13,010394	56
243 5271,5	+57,986509	-16,659098	-1,277036	55	243 5297,0	+48,889171	-36,226396	-10,577508	56
243 5272,0	+58,991566	-10,406441	+1,492416	55	243 5297,5	+52,452544	-31,059716	-8,017737	56
243 5272,5	+59,197554	-4,013209	+4,241488	55	243 5298,0	+55,360482	-25,511918	-5,361084	56
243 5273,0	+58,584258	+2,436415	+6,932208	55	243 5298,5	+57,566383	-19,647151	-2,639530	56
243 5273,5	+57,142165	+8,853607	+9,525714	55	243 5299,0	+59,030893	-13,535313	+0,113211	56
243 5274,0	+54,873658	+15,145919	+11,982786	55	243 5299,5	+59,727205	-7,251545	+2,862009	56
243 5274,5	+51,794094	+21,218596	+14,264526	55	243 5300,0	+59,619444	-0,875642	+5,570642	56
243 5275,0	+47,932773	+26,976218	+16,333166	55	243 5300,5	+58,708457	+5,508677	+8,202194	56
243 5275,5	+43,333554	+32,324657	+18,152943	55	243 5301,0	+56,987621	+11,814625	+10,719495	56
243 5276,0	+38,055179	+37,173371	+19,691133	55					

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z	J.D.	x	y	z		
243 5301,5	+54,466155	+17,953383	+13,085642	56	243 5336,5	-38,813124	+40,694714	+13,524199	56
243 5302,0	+51,165163	+23,835275	+15,264559	56	243 5337,0	-43,983305	+36,248785	+11,140979	56
243 5302,5	+47,118305	+29,371197	+17,221666	56	243 5337,5	-48,509726	+31,270483	+8,594949	56
243 5303,0	+42,372036	+34,474181	+18,924564	56	243 5338,0	-52,335353	+25,840289	+5,925727	56
243 5303,5	+36,985757	+39,061206	+20,343835	56	243 5338,5	-55,416321	+20,043680	+3,173763	56
243 5304,0	+31,031492	+43,055098	+21,453801	56	243 5339,0	-57,721972	+13,969095	+0,379455	56
243 5304,5	+24,593259	+46,386583	+22,233345	56	243 5339,5	-59,234583	+7,706029	-2,417612	56
243 5305,0	+17,765899	+48,996300	+22,666659	56	243 5340,0	-59,948745	+1,343342	-5,179335	56
243 5305,5	+10,653474	+50,836739	+22,743883	56	243 5340,5	-59,870462	-5,032217	-7,869615	56
243 5306,0	+3,367116	+51,873900	+22,461625	56	243 5341,0	-59,016036	-11,337192	-10,454766	56
243 5306,5	-3,977497	+52,088649	+21,823269	56	243 5341,5	-57,411077	-17,492357	-12,903801	56
243 5307,0	-11,263019	+51,477420	+20,838994	56	243 5342,0	-55,089277	-23,423375	-15,188594	56
243 5307,5	-18,373434	+50,052562	+19,525618	56	243 5342,5	-52,091341	-29,061257	-17,283969	56
243 5308,0	-25,197062	+47,841838	+17,906084	56	243 5343,0	-48,464014	-34,342647	-19,167731	56
243 5308,5	-31,629330	+44,887464	+16,008792	56	243 5343,5	-44,259220	-39,209982	-20,820639	56
243 5309,0	-37,575176	+41,244574	+13,866671	56	243 5344,0	-39,533200	-43,611491	-22,226323	56
243 5309,5	-42,950960	+36,979278	+11,516198	56	243 5344,5	-34,345991	-47,501283	-23,371271	56
243 5310,0	-47,685797	+32,166493	+8,996311	56	243 5345,0	-28,760734	-50,839183	-24,244693	56
243 5310,5	-51,722269	+26,887614	+6,347377	56	243 5345,5	-22,843334	-53,590810	-24,838514	56
243 5311,0	-55,016621	+21,228309	+3,610196	56	243 5346,0	-16,662036	-55,727528	-25,147308	56
243 5311,5	-57,538519	+15,276450	+0,825181	56	243 5346,5	-10,287079	-57,226414	-25,168255	56
243 5312,0	-59,270360	+9,120254	-1,968381	56	243 5347,0	-3,790427	-58,070461	-24,901193	56
243 5312,5	-60,206416	+2,846771	-4,732899	56	243 5347,5	+2,754571	-58,248582	-24,348591	56
243 5313,0	-60,351726	-3,459361	-7,432868	56	243 5348,0	+9,273477	-57,755835	-23,515607	56
243 5313,5	-59,721106	-9,716872	-10,035201	56	243 5348,5	+15,691156	-56,593673	-22,410152	56
243 5314,0	-58,337904	-15,848540	-12,509385	56	243 5349,0	+21,932181	-54,770127	-21,042940	56
243 5314,5	-56,233090	-21,781661	-14,827592	56	243 5349,5	+27,921420	-52,300218	-19,427589	56
243 5315,0	-53,444322	-27,448410	-16,964738	56	243 5350,0	+33,584587	-49,206073	-17,580612	56
243 5315,5	-50,015015	-32,785959	-18,898433	56	243 5350,5	+38,849053	-45,517285	-15,521514	56
243 5316,0	-45,993763	-37,736643	-20,609012	56	243 5351,0	+43,644681	-41,271099	-13,727255	56
243 5316,5	-41,433650	-42,248007	-22,079460	56	243 5351,5	+47,904778	-36,512451	-10,859703	56
243 5317,0	-36,391748	-46,272803	-23,295378	56	243 5352,0	+51,567238	-31,294037	-8,310531	56
243 5317,5	-30,928738	-49,769122	-24,244987	56	243 5352,5	+54,575634	-25,676069	-5,565023	56
243 5318,0	-25,108466	-52,700387	-24,919097	56	243 5353,0	+56,880442	-19,725943	-2,929306	56
243 5318,5	-18,997648	-55,035508	-25,311113	56	243 5353,5	+58,440243	-13,517689	-0,165512	56
243 5319,0	-12,665511	-56,748970	-25,417072	56	243 5354,0	+59,222841	-7,131146	+2,598680	56
243 5319,5	-6,183457	-57,821098	-25,235692	56	243 5354,5	+59,206371	-0,651026	+5,325550	56
243 5320,0	+0,375296	-58,238163	-24,768393	56	243 5355,0	+58,380148	+5,834327	+7,976929	56
243 5320,5	+6,936137	-57,992696	-24,019398	56	243 5355,5	+56,745341	+12,234284	+10,514840	56
243 5321,0	+13,423530	-57,083748	-22,995772	56	243 5356,0	+54,315501	+18,457461	+12,902185	56
243 5321,5	+19,761558	-55,517098	-21,707469	56	243 5356,5	+51,116652	+24,413305	+15,103423	56
243 5322,0	+25,874542	-53,305528	-20,167391	56	243 5357,0	+47,187280	+30,013759	+17,085261	56
243 5322,5	+31,687757	-50,469039	-18,391397	56	243 5357,5	+42,577898	+35,174907	+18,817323	56
243 5323,0	+37,128193	-47,034971	-16,398289	56	243 5358,0	+37,350386	+39,818542	+20,272714	56
243 5323,5	+42,125466	-43,038139	-14,209772	56	243 5358,5	+31,577121	+43,873685	+21,428600	56
243 5324,0	+46,612671	-38,520744	-11,850338	56	243 5359,0	+25,339819	+47,277972	+22,266656	56
243 5324,5	+50,527424	-33,532325	-9,347143	56	243 5359,5	+18,728178	+49,978829	+22,773443	56
243 5325,0	+53,812774	-28,129431	-6,729771	56	243 5360,0	+11,838376	+51,934526	+22,940697	56
243 5325,5	+56,418230	-22,375290	-4,029999	56	243 5360,5	+4,771409	+53,115011	+22,765522	56
243 5326,0	+58,300771	-16,339296	-1,281482	56	243 5361,0	-2,368681	+53,502457	+22,250442	56
243 5326,5	+59,425689	-10,096320	+1,480638	56	243 5361,5	-9,476647	+53,091700	+21,403421	56
243 5327,0	+59,767481	-3,725942	+4,220111	56	243 5362,0	-16,447948	+51,890357	+20,237704	56
243 5327,5	+59,310584	+2,688458	+6,900070	56	243 5362,5	-23,180612	+49,918582	+18,771554	56
243 5328,0	+58,050070	+9,060728	+9,483519	56	243 5363,0	-29,577136	+47,208788	+17,027950	56
243 5328,5	+55,992143	+15,303091	+11,933866	56	243 5363,5	-35,546222	+43,804867	+15,034074	56
243 5329,0	+53,154540	+21,327382	+14,215492	56	243 5364,0	-41,004410	+39,761292	+12,820795	56
243 5329,5	+49,566719	+27,046349	+16,294317	56	243 5364,5	-45,877510	+35,141913	+10,422018	56
243 5330,0	+45,269966	+32,375085	+18,138410	56	243 5365,0	-50,101795	+30,018591	+7,873997	56
243 5330,5	+40,317219	+37,232478	+19,718603	56	243 5365,5	-53,624856	+24,469623	+5,214589	56
243 5331,0	+34,772708	+41,542717	+21,009061	56	243 5366,0	-56,406247	+18,578116	+2,482514	56
243 5331,5	+28,711363	+45,236865	+21,987926	56	243 5366,5	-58,417682	+12,430294	-0,283372	56
243 5332,0	+22,217904	+48,254337	+22,637822	56	243 5367,0	-59,643059	+6,113832	-3,044790	56
243 5332,5	+15,385703	+50,544406	+22,946396	56	243 5367,5	-60,077991	-0,283715	-5,764637	56
243 5333,0	+8,315290	+52,067527	+22,906739	56	243 5368,0	-59,729314	-6,676342	-8,407548	56
243 5333,5	+1,112612	+52,796546	+22,517704	56	243 5368,5	-58,614257	-12,980848	-10,940340	56
243 5334,0	-6,112991	+52,717618	+21,784120	56	243 5369,0	-56,759448	-19,117883	-13,332354	56
243 5334,5	-13,251059	+51,830846	+20,716819	56	243 5369,5	-54,199973	-25,012804	-15,555717	56
243 5335,0	-20,192388	+50,150464	+19,332497	56	243 5370,0	-50,978290	-30,596283	-17,585510	56
243 5335,5	-26,831448	+47,704616	+17,653373	56	243 5370,5	-47,143190	-35,804770	-19,399840	56
243 5336,0	-33,068780	+44,534808	+15,706733	56	243 5371,0	-42,748845	-40,580777	-20,979876	56

J.D.	x	y	z	J.D.	x	y	z	
243 5371,5	-37,853917	-44,873009	-22,309825	56	243 5406,5	+50,051758	-34,301204 - 9,358111	56
243 5372,0	-32,520757	-48,636427	-23,376865	56	243 5407,0	+53,263983	-28,873429 - 6,812756	56
243 5372,5	-26,814728	-51,832207	-24,171073	56	243 5407,5	+55,796280	-23,071121 - 4,178447	56
243 5373,0	-20,803613	-54,427703	-24,685344	56	243 5408,0	+57,601156	-16,961798 - 1,487635	56
243 5373,5	-14,557119	-56,396328	-24,915295	56	243 5408,5	+58,638497	-10,620171 + 1,224978	56
243 5374,0	- 8,146486	-57,717547	-24,859225	56	243 5409,0	+58,876885	- 4,127704 + 3,922759	56
243 5374,5	- 1,644126	-58,376832	-24,518056	56	243 5409,5	+58,295119 + 2,428051	+ 6,567555	56
243 5375,0	+ 4,876705	-58,365614	-23,895285	56	243 5410,0	+56,883666 + 8,954486	+ 9,120276	56
243 5375,5	+11,342170	-57,681444	-22,997005	56	243 5410,5	+54,645950 +15,355341	+11,541572	56
243 5376,0	+17,678191	-56,328035	-21,831912	56	243 5411,0	+51,599497	+21,532462 +13,792689	56
243 5376,5	+23,810765	-54,315493	-20,411356	56	243 5411,5	+47,776664 +27,387936	+15,836414	56
243 5377,0	+29,666382	-51,660515	-18,749384	56	243 5412,0	+43,224887 +32,826430	+17,638053	56
243 5377,5	+35,172510	-48,386661	-16,862798	56	243 5412,5	+38,006414 +37,757749	+19,166476	56
243 5378,0	+40,258195	-44,524616	-14,771221	56	243 5413,0	+32,197353 +42,099337	+20,395038	56
243 5378,5	+44,854811	-40,112499	-12,497134	56	243 5413,5	+25,886163 +45,778632	+21,302410	56
243 5379,0	+48,896924	-35,196041	-10,065882	56	243 5414,0	+19,171601 +48,735149	+21,873233	56
243 5379,5	+52,323303	-29,828735	- 7,505619	56	243 5414,5	+12,160217 +50,921994	+22,098514	56
243 5380,0	+55,078116	-24,071839	- 4,847219	56	243 5415,0	+ 4,963608 +52,306958	+21,975794	56
243 5380,5	+57,112200	-17,994212	- 2,124062	56	243 5415,5	- 2,304393 +52,872994	+21,509075	56
243 5381,0	+58,384438	-11,671889	+ 0,628263	56	243 5416,0	- 9,530506 +52,618076	+20,708496	56
243 5381,5	+58,863120 - 5,187418	+ 3,372368	56	243 5416,5	-16,604538 +51,554692	+19,589878	56	
243 5382,0	+58,552798 + 1,371113	+ 6,069594	56	243 5417,0	-23,421591 +49,708775	+18,174067	56	
243 5382,5	+57,368023 + 7,911356	+ 8,680672	56	243 5417,5	-29,883947 +47,118516	+16,486266	56	
243 5383,0	+55,389311 +14,338256	+11,166455	56	243 5418,0	-35,902498 +43,832821	+14,555243	56	
243 5383,5	+52,608779 +20,555870	+13,488734	56	243 5418,5	-41,397834 +39,909806	+12,412639	56	
243 5384,0	+49,058063 +26,469390	+15,611119	56	243 5419,0	-46,300976 +35,415193	+10,092198	56	
243 5384,5	+44,782559 +31,987206	+17,499876	56	243 5419,5	-50,553756 +30,420755	+7,629115	56	
243 5385,0	+39,840952 +37,023064	+19,124773	56	243 5420,0	-54,109106 +25,002933	+5,059431	56	
243 5385,5	+34,304111 +41,497996	+20,459784	56	243 5420,5	-56,930948 +19,241406	+2,419447	56	
243 5386,0	+28,253735 +45,342157	+21,483709	56	243 5421,0	-58,994087 +13,217866	- 0,254766	56	
243 5386,5	+21,780601 +48,496315	+22,180643	56	243 5421,5	-60,283869 + 7,014862	- 2,927806	56	
243 5387,0	+14,982626 +50,913052	+22,540265	56	243 5422,0	-60,795864 + 0,714762	- 5,565341	56	
243 5387,5	+7,962746 +52,557558	+22,557987	56	243 5422,5	-60,535364 - 5,601211	- 8,134471	56	
243 5388,0	+ 0,826798 +53,408140	+22,234945	56	243 5423,0	-59,516870 -11,853851	-10,604008	56	
243 5388,5	- 6,318619 +53,456295	+21,577839	56	243 5423,5	-57,763539 -17,966750	-12,944771	56	
243 5389,0	-13,368123 +52,706488	+20,598633	56	243 5424,0	-55,306553 -23,867005	-15,129804	56	
243 5389,5	-20,219438 +51,175788	+19,314226	56	243 5424,5	-52,184526 -29,485876	-17,134592	56	
243 5390,0	-26,775075 +48,893072	+17,745968	56	243 5425,0	-48,442725 -34,759324	-18,937211	56	
243 5390,5	-32,943810 +45,898192	+15,919160	56	243 5425,5	-44,132416 -39,628504	-20,518450	56	
243 5391,0	-38,641989 +42,240949	+13,862516	56	243 5426,0	-39,310138 -44,040193	-21,861942	56	
243 5391,5	-43,794644 +37,979990	+11,607571	56	243 5426,5	-34,036880 -47,947043	-22,954168	56	
243 5392,0	-48,336304 +33,181505	+ 9,188092	56	243 5427,0	-28,377461 -51,307925	-23,784534	56	
243 5392,5	-52,211746 +27,918032	+ 6,639483	56	243 5427,5	-22,399696 -54,087991	-24,345341	56	
243 5393,0	-55,376460 +22,267095	+3,998188	56	243 5428,0	-16,173772 -56,258848	-24,631760	56	
243 5393,5	-57,796875 +16,309851	+ 1,301098	56	243 5428,5	- 9,771571 -57,798550	-24,641792	56	
243 5394,0	-59,450571 +10,129794	- 1,414993	56	243 5429,0	- 3,266057 -58,691624	-24,376204	56	
243 5394,5	-60,326037 + 3,811420	-4,113940	56	243 5429,5	+ 3,269297 -58,928984	-23,838445	56	
243 5395,0	-60,422498 - 2,561021	- 6,760730	56	243 5430,0	+ 9,761010 -58,507879	-23,034575	56	
243 5395,5	-59,749444 - 8,904691	- 9,321930	56	243 5430,5	+16,136064 -57,431842	-21,973179	56	
243 5396,0	-58,326031 -15,139244	-11,766080	56	243 5431,0	+22,322337 -55,710539	-20,665286	56	
243 5396,5	-56,180361 -21,187778	-14,064012	56	243 5431,5	+28,249007 -53,359786	-19,124323	56	
243 5397,0	-53,348755 -26,977691	-16,189144	56	243 5432,0	+33,846940 -50,401494	-17,366052	56	
243 5397,5	-49,874767 -32,441316	-18,117642	56	243 5432,5	+39,049104 -46,863670	-15,408533	56	
243 5398,0	-45,808382 -37,516505	-19,828576	56	243 5433,0	+43,790956 -42,780413	-13,272084	56	
243 5398,5	-41,205107 -42,147043	-21,304026	56	243 5433,5	+48,010913 -38,191977	-10,979261	56	
243 5399,0	-36,125020 -46,282857	-22,529050	56	243 5434,0	+51,650910 -33,144890	- 8,554849	56	
243 5399,5	-30,632044 -49,880273	-23,491741	56	243 5434,5	+54,656997 -27,691999	- 6,025827	56	
243 5400,0	-24,793092 -52,901986	-24,183121	56	243 5435,0	+56,980098 -21,892544	- 3,421314	56	
243 5400,5	-18,677450 -55,317161	-24,597124	56	243 5435,5	+58,576844 -15,812159	- 0,772490	56	
243 5401,0	-12,356115 -57,101312	-24,730490	56	243 5436,0	+59,410609 - 9,522806	+ 1,887526	56	
243 5401,5	- 5,901292 -58,236270	-24,582691	56	243 5436,5	+59,452623 - 3,102539	+ 4,523891	56	
243 5402,0	+ 0,614081 -58,710065	-24,155837	56	243 5437,0	+58,683258 + 3,364898	+ 7,100331	56	
243 5402,5	+ 7,116733 -58,516892	-23,454622	56	243 5437,5	+57,093293 + 9,790762	+ 9,579537	56	
243 5403,0	+13,533406 -57,657035	-22,486269	56	243 5438,0	+54,685385 +16,082309	+11,923725	56	
243 5403,5	+19,791204 -56,136925	-21,260497	56	243 5438,5	+51,475233 +22,144157	+14,095315	56	
243 5404,0	+25,817872 -53,969081	-19,789483	56	243 5439,0	+47,492690 +27,880010	+16,057732	56	
243 5404,5	+31,542214 -51,172358	-18,087918	56	243 5439,5	+42,782553 +33,194825	+17,776389	56	
243 5405,0	+36,894429 -47,771980	-16,172989	56	243 5440,0	+37,404815 +37,997248	+19,219690	56	
243 5405,5	+41,806567 -43,799735	-14,064412	56	243 5440,5	+31,434336 +42,202277	+20,360112	56	
243 5406,0	+46,213138 -39,294261	-11,784489	56	243 5441,0	+24,959841 +45,733975	+21,175197	56	

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z	J.D.	x	y	z		
243 5441,5	+18,082230	+48,528118	+21,648488	56	243 5476,5	-59,796235	+ 0,931320	- 5,407901	56
243 5442,0	+10,912117	+50,534379	+21,770176	56	243 5477,0	-59,740864	- 5,448607	- 8,014611	56
243 5442,5	+ 3,566916	+51,718109	+21,537542	56	243 5477,5	-58,899811	-11,755997	-10,515500	56
243 5443,0	- 3,832454	+52,061379	+20,955076	56	243 5478,0	-57,300779	-17,912533	-12,881247	56
243 5443,5	-11,165025	+51,563235	+20,034229	56	243 5478,5	-54,979140	-23,844994	-15,085369	56
243 5444,0	-18,313056	+50,239292	+18,792928	56	243 5479,0	-51,976845	-29,485533	-17,104216	56
243 5444,5	-25,165021	+48,120667	+17,254856	56	243 5479,5	-48,341637	-34,771862	-18,916976	56
243 5445,0	-31,618073	+45,252299	+15,448498	56	243 5480,0	-44,126314	-39,647390	-20,505653	56
243 5445,5	-37,579962	+41,691020	+13,406186	56	243 5480,5	-39,387993	-44,061257	-21,855015	56
243 5446,0	-42,970363	+37,503421	+11,163083	56	243 5481,0	-34,187585	-47,968417	-22,952571	56
243 5446,5	-47,721544	+32,763614	+ 8,756195	56	243 5481,5	-28,589245	-51,329694	-23,788532	56
243 5447,0	-51,778698	+27,551208	+ 6,223519	56	243 5482,0	-22,659902	-54,111843	-24,355815	56
243 5447,5	-55,099796	+21,949405	+ 3,603272	56	243 5482,5	-16,468746	-56,287587	-24,649977	56
243 5448,0	-57,655115	+16,043271	+ 0,933230	56	243 5483,0	-10,086821	-57,835792	-24,669268	56
243 5448,5	-59,426633	+ 9,918328	- 1,749786	56	243 5483,5	- 3,586512	-58,741451	-24,414566	56
243 5449,0	-60,407328	+ 3,659365	- 4,410343	56	243 5484,0	+ 2,958930	-58,995868	-23,889402	56
243 5449,5	-60,600329	- 2,650591	- 7,014714	56	243 5484,5	+ 9,475886	-58,596630	-23,099910	56
243 5450,0	-60,018153	- 8,931052	- 9,531144	56	243 5485,0	+15,890920	-57,547831	-22,054842	56
243 5450,5	-58,681928	-15,104757	-11,930042	56	243 5485,5	+22,131313	-55,859922	-20,765481	56
243 5451,0	-56,620562	-21,098196	-14,184121	56	243 5486,0	+28,125672	-53,549892	-19,245644	56
243 5451,5	-53,870112	-26,842064	-16,268511	56	243 5486,5	+33,804520	-50,641140	-17,511564	56
243 5452,0	-50,473095	-32,271650	-18,160870	56	243 5487,0	+39,100891	-47,163417	-15,581830	56
243 5452,5	-46,477839	-37,327173	-19,841438	56	243 5487,5	+43,950967	-43,152710	-13,477262	56
243 5453,0	-41,937891	-41,954079	-21,293111	56	243 5488,0	+48,294699	-38,651089	-11,220787	56
243 5453,5	-36,911388	-46,103295	-22,501484	56	243 5488,5	+52,076424	-33,706489	- 8,837307	56
243 5454,0	-31,460465	-49,731452	-23,454876	56	243 5489,0	+55,245445	-28,372431	- 6,353514	56
243 5454,5	-25,650705	-52,801143	-24,144391	56	243 5489,5	+57,756707	-22,707766	- 3,797728	56
243 5455,0	-19,550497	-55,281055	-24,563906	56	243 5490,0	+59,571347	-16,776299	- 1,199685	56
243 5455,5	-13,230467	-57,146126	-24,710073	56	243 5490,5	+60,657279	-10,646405	+ 1,409666	56
243 5456,0	- 6,762869	-58,377629	-24,582297	56	243 5491,0	+60,989877	- 4,390613	+ 3,998397	56
243 5456,5	- 0,221004	-58,963264	-24,182718	56	243 5491,5	+60,552474	+ 1,914905	+ 6,533868	56
243 5457,0	+ 6,321365	-58,897221	-23,516181	56	243 5492,0	+59,337109	+ 8,190901	+ 8,983017	56
243 5457,5	+12,790602	-58,180104	-22,590141	56	243 5492,5	+57,345043	+14,355688	+11,312667	56
243 5458,0	+19,113738	-56,818903	-21,414599	56	243 5493,0	+54,587475	+20,325938	+13,489934	56
243 5458,5	+25,219032	-54,827029	-20,002071	56	243 5493,5	+51,086093	+26,017581	+15,482629	56
243 5459,0	+31,036480	-52,224106	-18,367441	56	243 5494,0	+46,873670	+31,346887	+17,259749	56
243 5459,5	+36,498302	-49,035896	-16,527883	56	243 5494,5	+41,994476	+36,231726	+18,792053	56
243 5460,0	+41,539472	-45,294243	-14,502794	56	243 5495,0	+36,504590	+40,593032	+20,052664	56
243 5460,5	+46,098193	-41,036937	-12,313679	56	243 5495,5	+30,471980	+44,356482	+21,017770	56
243 5461,0	+50,116367	-36,307560	- 9,984060	56	243 5496,0	+23,976222	+47,454294	+21,667327	56
243 5461,5	+53,540164	-31,155434	- 7,539377	56	243 5496,5	+17,107911	+49,827248	+21,985824	56
243 5462,0	+56,320503	-25,635458	- 5,006899	56	243 5497,0	+ 9,967505	+51,426618	+21,962962	56
243 5462,5	+58,413693	-19,808000	- 2,415599	56	243 5497,5	+ 2,663754	+52,216199	+21,594332	56
243 5463,0	+59,782073	-13,738749	+ 0,203965	56	243 5498,0	- 4,688492	+52,173957	+20,881875	56
243 5463,5	+60,394709	- 7,498496	+ 2,819805	56	243 5498,5	-11,970898	+51,293378	+19,834187	56
243 5464,0	+60,228273	- 1,162866	+ 5,398689	56	243 5499,0	-19,064660	+49,584357	+18,466583	56
243 5464,5	+59,267889	+ 5,188058	+ 7,906399	56	243 5499,5	-25,853726	+47,073338	+16,800865	56
243 5465,0	+57,508199	+11,470297	+10,308047	56	243 5500,0	-32,228066	+43,802835	+14,864805	56
243 5465,5	+54,954256	+17,596698	+12,568466	56	243 5500,5	-38,086685	+39,830218	+12,691363	56
243 5466,0	+51,622657	+23,477955	+14,652723	56	243 5501,0	-43,340201	+35,225823	+10,317680	56
243 5466,5	+47,542477	+29,023878	+16,526748	56	243 5501,5	-47,912903	+30,070712	+ 7,783957	56
243 5467,0	+42,756053	+34,145002	+18,158061	56	243 5502,0	-51,744039	+24,453983	+ 5,132253	56
243 5467,5	+37,319511	+38,754501	+19,516598	56	243 5502,5	-54,788434	+18,470088	+ 2,405322	56
243 5468,0	+31,302951	+42,770432	+20,575657	56	243 5503,0	-57,016461	+12,216186	- 0,354463	56
243 5468,5	+24,790034	+46,118144	+21,312843	56	243 5503,5	-58,413357	+ 5,789735	- 3,106021	56
243 5469,0	+17,877024	+48,732856	+21,711020	56	243 5504,0	-58,978283	- 0,713554	- 5,810311	56
243 5469,5	+10,671064	+50,562024	+21,759128	56	243 5504,5	-58,722958	+ 7,201410	- 8,430883	56
243 5470,0	+ 3,287888	+51,567673	+21,452891	56	243 5505,0	-57,670165	-13,586288	-10,934276	56
243 5470,5	- 4,151166	+51,727985	+20,795199	56	243 5505,5	-55,852366	-19,786280	-13,290247	56
243 5471,0	-11,522536	+51,038488	+19,796247	56	243 5506,0	-53,310149	-25,725716	-15,471865	56
243 5471,5	-18,704005	+49,512267	+18,473287	56	243 5506,5	-50,090991	-31,335513	-17,455543	56
243 5472,0	-25,578258	+47,179504	+16,850077	56	243 5507,0	-46,248033	-36,553294	-19,220957	56
243 5472,5	-32,036107	+44,086208	+14,956077	56	243 5507,5	-41,839135	-41,323459	-20,751000	56
243 5473,0	-37,979182	+40,292270	+12,825354	56	243 5508,0	-36,925936	-45,597042	-22,031610	56
243 5473,5	-43,321953	+35,869125	+10,495460	56	243 5508,5	-31,573185	-49,331644	-23,051704	56
243 5474,0	-47,993066	+30,897185	+ 8,006226	56	243 5509,0	-25,848114	-52,491239	-23,803014	56
243 5474,5	-51,935923	+25,463187	+ 5,398637	56	243 5509,5	-19,819961	-55,046145	-24,280039	56
243 5475,0	-55,108697	+19,657720	+ 2,713811	56	243 5510,0	-13,559493	-56,972789	-24,479909	56
243 5475,5	-57,483765	+13,572968	+ 0,007862	56	243 5510,5	- 7,138676	-58,253814	-24,402379	56
243 5476,0	-59,046927	+ 7,300827	- 2,727435	56	243 5511,0	- 0,630261	-58,877938	-24,049746	56

J.D.	x	y	z	J.D.	x	y	z		
243 5511,5	+ 5,892566	-58,840028	-23,426844	56	243 5546,5	+59,022022	+ 8,427728	+ 8,662147	56
243 5512,0	+12,356571	-58,141118	-22,541004	56	243 5547,0	+57,103942	+14,704249	+11,004709	56
243 5512,5	+18,688887	-56,788529	-21,402065	56	243 5547,5	+54,427048	+20,780797	+13,198059	56
243 5513,0	+24,817502	-54,795931	-20,022354	56	243 5548,0	+51,017641	+26,571976	+15,210425	56
243 5513,5	+30,671739	-52,183369	-18,416648	56	243 5548,5	+46,913281	+31,994480	+17,011912	56
243 5514,0	+36,182875	-48,977410	-16,602174	56	243 5549,0	+42,162527	+36,968495	+18,575028	56
243 5514,5	+41,284750	-45,211059	-14,598525	56	243 5549,5	+36,824600	+41,419177	+19,875255	56
243 5515,0	+45,914454	-40,923794	-12,427595	56	243 5550,0	+30,968690	+45,278024	+20,891527	56
243 5515,5	+50,013052	-36,161397	-10,113465	56	243 5550,5	+24,673123	+48,484236	+21,606693	56
243 5516,0	+53,526302	-30,975783	- 7,682240	56	243 5551,0	+18,024235	+50,985852	+22,007875	56
243 5516,5	+56,405505	-25,424750	- 5,161883	56	243 5551,5	+11,115203	+52,740975	+22,086847	56
243 5517,0	+58,608156	-19,571534	- 2,581981	56	243 5552,0	+ 4,044569	+53,718652	+21,840250	56
243 5517,5	+60,098786	-13,484403	+ 0,026524	56	243 5552,5	- 3,085306	+53,899655	+21,269762	56
243 5518,0	+60,849583	- 7,236011	+ 2,631624	56	243 5553,0	-10,169948	+53,277110	+20,382186	56
243 5518,5	+60,841146	- 0,902781	+ 5,200586	56	243 5553,5	-17,104569	+51,856876	+19,189442	56
243 5519,0	+60,062946	+ 5,435892	+ 7,700299	56	243 5554,0	-23,785961	+49,657662	+17,708443	56
243 5519,5	+58,513991	+11,698480	+10,097699	56	243 5554,5	-30,114428	+46,710902	+15,960857	56
243 5520,0	+56,203089	+17,802248	+12,360134	56	243 5555,0	-35,995718	+43,060353	+13,972778	56
243 5520,5	+53,149327	+23,664263	+14,455847	56	243 5555,5	-41,342889	+38,761384	+11,774266	56
243 5521,0	+49,382212	+29,202459	+16,354399	56	243 5556,0	-46,078040	+33,879928	+ 9,398764	56
243 5521,5	+44,941833	+34,336805	+18,027161	56	243 5556,5	-50,133898	+28,491203	+ 6,882462	56
243 5522,0	+39,878845	+38,990523	+19,447806	56	243 5557,0	-53,455035	+22,678125	+ 4,263521	56
243 5522,5	+34,254283	+43,091363	+20,592797	56	243 5557,5	-55,998898	+16,529559	+1,581302	56
243 5523,0	+28,139241	+46,572985	+21,441929	56	243 5558,0	-57,736381	+10,138379	+1,124462	56
243 5523,5	+21,614289	+49,376328	+21,978806	56	243 5558,5	-58,651962	+ 3,599504	- 3,814476	56
243 5524,0	+14,768696	+51,451049	+22,191366	56	243 5559,0	-58,743612	- 2,992038	- 6,450628	56
243 5524,5	+ 7,699333	+52,756897	+22,072325	56	243 5559,5	-58,022177	- 9,542950	- 8,996687	56
243 5525,0	+ 0,509317	+53,265043	+21,619597	56	243 5560,0	-56,510474	-15,963317	-11,418865	56
243 5525,5	- 6,693691	+52,959317	+20,836619	56	243 5560,5	-54,242258	-22,168022	-13,686301	56
243 5526,0	-13,799486	+51,837140	+19,732554	56	243 5561,0	-51,260859	-28,077891	-15,771372	56
243 5526,5	-20,697595	+49,910213	+18,322352	56	243 5561,5	-47,617851	-33,620556	-17,649941	56
243 5527,0	-27,279757	+47,204789	+16,626628	56	243 5562,0	-43,371653	-38,731051	-19,301452	56
243 5527,5	-33,442490	+43,761473	+14,671356	56	243 5562,5	-38,586183	-43,352165	-20,708952	56
243 5528,0	-39,089688	+39,634588	+12,487354	56	243 5563,0	-33,329603	-47,434578	-21,859022	56
243 5528,5	-44,134934	+34,890888	+10,109561	56	243 5563,5	-27,673179	-50,936781	-22,741656	56
243 5529,0	-48,503622	+29,607960	+ 7,576200	56	243 5564,0	-21,690340	-53,824986	-23,350121	56
243 5529,5	-52,134567	+23,872153	+ 4,927781	56	243 5564,5	-15,455824	-56,072885	-23,680796	56
243 5530,0	-54,981071	+17,776246	+ 2,206070	56	243 5565,0	- 9,044962	-57,661265	-23,732938	56
243 5530,5	-57,011485	+11,417044	- 0,546938	56	243 5565,5	- 2,533144	-58,577847	-23,508579	56
243 5531,0	-58,209092	+ 4,892934	- 3,289996	56	243 5566,0	+ 4,004637	-58,816955	-23,012352	56
243 5531,5	-58,571577	- 1,698331	- 5,983449	56	243 5566,5	+10,494187	-58,379241	-22,251330	56
243 5532,0	-58,110088	- 8,261640	- 8,589951	56	243 5567,0	+16,862407	-57,271588	-21,234963	56
243 5532,5	-56,847862	-14,706157	-11,075011	56	243 5567,5	+23,037592	-55,506885	-19,974975	56
243 5533,0	-54,818899	-20,946648	-13,407405	56	243 5568,0	+28,949701	-53,103992	-18,485300	56
243 5533,5	-52,066309	-26,904398	-15,559372	56	243 5568,5	+34,530706	-50,087778	-16,782077	56
243 5534,0	-48,640893	-32,507847	-17,506771	56	243 5569,0	+39,714860	-46,489009	-14,883576	56
243 5534,5	-44,599657	-37,692902	-19,229041	56	243 5569,5	+44,439211	-42,344561	-12,810235	56
243 5535,0	-40,004566	-42,403064	-20,709155	56	243 5570,0	+48,644015	-37,697375	-10,584594	56
243 5535,5	-34,921443	-46,589409	-21,933497	56	243 5570,5	+52,273378	-32,596560	- 8,231295	56
243 5536,0	-29,418939	-50,210352	-22,891675	56	243 5571,0	+55,275962	-27,097418	- 5,777002	56
243 5536,5	-23,567807	-53,231480	-23,576384	56	243 5571,5	+57,605769	-21,261365	- 3,250323	56
243 5537,0	-17,440255	-55,625316	-23,983254	56	243 5572,0	+59,223056	-15,155765	- 0,681636	56
243 5537,5	-11,109357	-57,370986	-24,110649	56	243 5572,5	+60,095319	- 8,853629	+1,897109	56
243 5538,0	- 4,648705	-58,454082	-23,959589	56	243 5573,0	+60,198337	- 2,433123	+ 4,452681	56
243 5538,5	+ 1,868003	-58,866550	-23,533653	56	243 5573,5	+59,517233	+ 4,023159	+ 6,950955	56
243 5539,0	+ 8,367263	-58,606394	-22,838844	56	243 5574,0	+58,047377	+10,429113	+ 9,357361	56
243 5539,5	+14,776063	-57,677774	-21,883589	56	243 5574,5	+55,795311	+16,696292	+11,637429	56
243 5540,0	+21,022221	-56,090982	-20,678693	56	243 5575,0	+52,779493	+22,735343	+13,757425	56
243 5540,5	+27,034699	-53,862403	-19,237303	56	243 5575,5	+49,030564	+28,457527	+15,684980	56
243 5541,0	+32,744023	-51,014636	-17,574906	56	243 5576,0	+44,591683	+33,776556	+17,389854	56
243 5541,5	+38,082765	-47,576604	-15,709340	56	243 5576,5	+39,518141	+38,610340	+18,844574	56
243 5542,0	+42,986015	-43,583534	-13,660721	56	243 5577,0	+33,876825	+42,882830	+20,025136	56
243 5542,5	+47,392130	-39,077153	-11,451474	56	243 5577,5	+27,745281	+46,525799	+20,911612	56
243 5543,0	+51,243320	-34,105528	- 9,106198	56	243 5578,0	+21,210387	+49,480428	+21,488655	56
243 5543,5	+54,486534	-28,723104	- 6,651610	56	243 5578,5	+14,366734	+51,698607	+21,745873	56
243 5544,0	+57,074290	-22,990473	- 4,116366	56	243 5579,0	+ 7,314851	+53,144108	+21,678125	56
243 5544,5	+58,965543	-16,974031	- 1,530854	56	243 5579,5	+ 0,159210	+53,793318	+21,285631	56
243 5545,0	+60,126663	-10,745575	+1,073068	56	243 5580,0	- 6,993821	+53,635652	+20,573946	56
243 5545,5	+60,532300	- 4,381636	+ 3,662412	56	243 5580,5	-14,037999	+52,673733	+19,553846	56
243 5546,0	+60,166192	+ 2,037300	+ 6,203446	56	243 5581,0	-20,869237	+50,923209	+18,241064	56

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z	J.D.	x	y	z		
243 5581,5	-27,387450	+48,412262	+16,655928	56	243 5616,5	-45,071527	-37,574919	-18,933795	56
243 5582,0	-33,498300	+45,180904	+14,822929	56	243 5617,0	-40,391724	-42,274940	-20,351054	56
243 5582,5	-39,114757	+41,280098	+12,770219	56	243 5617,5	-35,221388	-46,465959	-21,522764	56
243 5583,0	-44,158476	+36,770666	+10,529048	56	243 5618,0	-29,629090	-50,103329	-22,437692	56
243 5583,5	-48,560955	+31,722018	+8,133171	56	243 5618,5	-23,686703	-53,149751	-23,087808	56
243 5584,0	-52,264447	+26,210808	+5,618219	56	243 5619,0	-17,468453	-55,575251	-23,468177	56
243 5584,5	-55,222735	+20,319508	+3,021062	56	243 5619,5	-11,050129	-57,357312	-23,576945	56
243 5585,0	-57,401515	+14,134854	+0,379165	56	243 5620,0	-4,508237	-58,480659	-23,415178	56
243 5585,5	-58,778777	+7,746354	+0,270042	56	243 5620,5	+2,080709	-58,937190	-22,986761	56
243 5586,0	-59,344662	+1,244720	-4,889775	56	243 5621,0	+8,640839	-58,725697	-22,298235	56
243 5586,5	-59,101379	-5,279646	-7,444476	56	243 5621,5	+15,097524	-57,851717	-21,358672	56
243 5587,0	-58,062625	-11,738068	-9,900339	56	243 5622,0	+21,377887	-56,327223	-20,179519	56
243 5587,5	-56,253019	-18,044959	-12,225770	56	243 5622,5	+27,411231	-54,170321	-18,774435	56
243 5588,0	-53,707173	-24,118984	-14,391793	56	243 5623,0	+33,129466	-51,405113	-17,159186	56
243 5588,5	-50,468814	-29,884127	-16,372365	56	243 5623,5	+38,467451	-48,061410	-15,351518	56
243 5589,0	-46,589614	-35,270525	-18,144617	56	243 5624,0	+43,363344	-44,174545	-13,371036	56
243 5589,5	-42,128091	-40,215155	-19,689010	56	243 5624,5	+47,758952	-39,785247	-11,239137	56
243 5590,0	-37,148400	-44,662290	-20,989419	56	243 5625,0	+51,600038	-34,939459	-8,978893	56
243 5590,5	-31,719189	-48,563813	-22,033140	56	243 5625,5	+54,836707	-29,688261	-6,615004	56
243 5591,0	-25,912523	-51,879344	-22,810842	56	243 5626,0	+57,423860	-24,087795	-4,173705	56
243 5591,5	-19,802833	-54,576219	-23,316468	56	243 5626,5	+59,321682	-18,199181	-1,682705	56
243 5592,0	-13,466016	-56,629391	-23,547111	56	243 5627,0	+60,496240	-12,088420	+0,828910	56
243 5592,5	-6,978628	-58,021210	-23,502848	56	243 5627,5	+60,920202	-5,826235	+3,330819	56
243 5593,0	-0,417176	-58,741222	-23,186604	56	243 5628,0	+60,573541	+0,512172	+5,791606	56
243 5593,5	+6,142463	-58,785780	-22,603930	56	243 5628,5	+59,444516	+6,847467	+8,179003	56
243 5594,0	+12,625540	-58,157905	-21,762908	56	243 5629,0	+57,530602	+13,096723	+10,460173	56
243 5594,5	+18,958844	-56,866912	-20,673974	56	243 5629,5	+54,839463	+19,174177	+12,602122	56
243 5595,0	+25,071057	-54,928236	-19,349798	56	243 5630,0	+51,389943	+24,992215	+14,572137	56
243 5595,5	+30,893070	-52,363229	-17,805189	56	243 5630,5	+47,212993	+30,462701	+16,338430	56
243 5596,0	+36,358278	-49,199032	-16,057007	56	243 5631,0	+42,352397	+35,498599	+17,870823	56
243 5596,5	+41,402878	-45,468453	-14,124094	56	243 5631,5	+36,865095	+40,015805	+19,141507	56
243 5597,0	+45,966204	-41,209980	-12,027236	56	243 5632,0	+30,821310	+43,935403	+20,125927	56
243 5597,5	+49,991102	-36,467726	-9,789116	56	243 5632,5	+24,303977	+47,185879	+20,803623	56
243 5598,0	+53,424427	-31,291486	-7,434292	56	243 5633,0	+17,407740	+49,705559	+21,159072	56
243 5598,5	+56,217498	-25,736703	-4,989123	56	243 5633,5	+10,237199	+51,444724	+21,182369	56
243 5599,0	+58,326899	-19,864520	-2,481735	56	243 5634,0	+2,904723	+52,367626	+20,869823	56
243 5599,5	+59,715094	-13,741639	+0,058105	56	243 5634,5	-4,472312	+52,453959	+20,224264	56
243 5600,0	+60,351401	-7,440202	+2,599121	56	243 5635,0	-11,774589	+51,699692	+19,255100	56
243 5600,5	+60,213002	-1,037450	+5,108754	56	243 5635,5	-18,884048	+50,117313	+17,978119	56
243 5601,0	+59,285855	+5,384778	+7,553452	56	243 5636,0	-25,687033	+47,735419	+16,415032	56
243 5601,5	+57,565969	+11,740777	+9,899065	56	243 5636,5	-32,077138	+44,597552	+14,592743	56
243 5602,0	+55,060274	+17,941963	+12,111324	56	243 5637,0	-37,957661	+40,760623	+12,542534	56
243 5602,5	+51,787702	+23,898172	+14,156441	56	243 5637,5	-43,243495	+36,292918	+10,299076	56
243 5603,0	+47,779875	+29,519239	+16,001809	56	243 5638,0	-47,862474	+31,271898	+7,899449	56
243 5603,5	+43,081545	+34,716817	+17,616746	56	243 5638,5	-51,756071	+25,781895	+5,382183	56
243 5604,0	+37,750693	+39,406432	+18,973327	56	243 5639,0	-54,879722	+19,911949	+2,786369	56
243 5604,5	+31,858108	+43,509639	+20,047175	56	243 5639,5	-57,202624	+13,753733	+0,150859	56
243 5605,0	+25,486518	+46,956226	+20,818270	56	243 5640,0	-58,707230	+7,399727	-2,486393	56
243 5605,5	+18,729144	+49,686215	+21,271589	56	243 5640,5	-59,388509	+0,941623	-5,088902	56
243 5606,0	+11,687843	+51,651670	+21,397656	56	243 5641,0	-59,253144	-5,530991	-7,622083	56
243 5606,5	+4,470834	+52,818134	+21,192885	56	243 5641,5	-58,318441	-11,931762	-10,053613	56
243 5607,0	-2,809835	+53,165595	+20,659735	56	243 5642,0	-56,611463	-18,178449	-12,353672	56
243 5607,5	-10,040942	+52,688928	+19,806640	56	243 5642,5	-54,167985	-24,193675	-14,995156	56
243 5608,0	-17,110744	+51,397840	+18,647737	56	243 5643,0	-51,031489	-29,905451	-16,453795	56
243 5608,5	-23,911460	+49,316336	+17,202431	56	243 5643,5	-47,252341	-35,247687	-18,208257	56
243 5609,0	-30,341493	+46,481767	+15,494808	56	243 5644,0	-42,886794	-40,160492	-19,740191	56
243 5609,5	-36,307368	+42,943575	+13,552970	56	243 5644,5	-37,996259	-44,590523	-21,034294	56
243 5610,0	-41,725216	+38,761756	+11,408279	56	243 5645,0	-32,646379	-48,491133	-22,078268	56
243 5610,5	-46,521956	+34,005244	+9,094632	56	243 5645,5	-26,906318	-51,822558	-22,862850	56
243 5611,0	-50,636039	+28,750189	+6,647694	56	243 5646,0	-20,847964	-54,552012	-23,381760	56
243 5611,5	-54,018022	+23,078338	+4,104215	56	243 5646,5	-14,545217	-56,653769	-23,631673	56
243 5612,0	-56,630594	+17,075315	+1,501355	56	243 5647,0	-8,073249	-58,109095	-23,612126	56
243 5612,5	-58,448669	+10,829153	-1,123910	56	243 5647,5	-1,507850	-58,906279	-23,325469	56
243 5613,0	-59,459066	+4,428825	-3,735336	56	243 5648,0	+5,075251	-59,040501	-22,776748	56
243 5613,5	-59,660122	-2,037069	-6,297897	56	243 5648,5	+11,601003	-58,513726	-21,973605	56
243 5614,0	-59,061090	-8,481512	-8,778184	56	243 5649,0	+17,995615	-57,334541	-20,926162	56
243 5614,5	-57,681665	-14,820166	-11,144826	56	243 5649,5	+24,187134	-55,517973	-19,646898	56
243 5615,0	-55,551042	-20,972317	-13,368755	56	243 5650,0	+30,105954	-53,085256	-18,150510	56
243 5615,5	-52,707311	-26,861800	-15,423507	56	243 5650,5	+35,685258	-50,063548	-16,453758	56
243 5616,0	-49,196440	-32,417666	-17,285413	56	243 5651,0	+40,861553	-46,485825	-14,575380	56

J.D.	x	y	z	J.D.	x	y	z		
243 5651,5	+45,574966	-42,390463	-12,535894	56	243 5676,5	+21,121092	-56,538886	-20,348945	57
243 5652,0	+49,769735	-37,821115	-10,357516	56	243 5677,0	+27,186314	-54,398856	-18,972750	57
243 5652,5	+53,394569	-32,826442	-8,064010	56	243 5677,5	+32,951314	-51,655531	-17,387044	57
243 5653,0	+56,402983	-27,459857	-5,680562	56	243 5678,0	+38,350860	-48,339429	-15,609574	57
243 5653,5	+58,753789	-21,779361	-3,233682	56	243 5678,5	+43,323179	-44,486847	-13,660029	57
243 5654,0	+60,411464	-15,847286	-0,751047	56	243 5679,0	+47,810436	-40,139572	-11,559883	57
243 5654,5	+61,346633	-9,730076	+1,738605	56	243 5679,5	+51,759197	-35,344623	-9,332266	57
243 5655,0	+61,536589	-3,498043	+4,205631	56	243 5680,0	+55,120946	-30,153994	-7,001797	57
243 5655,5	+60,965879	+2,774947	+6,619656	56	243 5680,5	+57,852471	-24,624291	-4,594426	57
243 5656,0	+59,626960	+9,011818	+8,949761	56	243 5681,0	+59,916351	-18,816416	-2,137263	57
243 5656,5	+57,520906	+15,132783	+11,164756	56	243 5681,5	+61,281387	-12,795217	+0,341612	57
243 5657,0	+54,658187	+21,055939	+13,233460	56	243 5682,0	+61,923079	-6,629104	+2,813310	57
243 5657,5	+51,059483	+26,698101	+15,125129	56	243 5682,5	+61,823957	-0,389599	+5,248363	57
243 5658,0	+46,756377	+31,975782	+16,809873	56	243 5683,0	+60,974182	+5,849065	+7,616928	57
243 5658,5	+41,792104	+36,806506	+18,259264	56	243 5683,5	+59,371941	+12,010491	+9,889015	57
243 5659,0	+36,222008	+41,110312	+19,446940	56	243 5684,0	+57,023892	+18,016662	+12,034767	57
243 5659,5	+30,113845	+44,811629	+20,349393	56	243 5684,5	+53,945679	+23,788603	+14,024741	57
Epoch 1957.0					243 5685,0	+50,162479	+29,247142	+15,830260	57
243 5651,0	+40,873358	-46,476691	-14,571409	57	243 5685,5	+45,709392	+34,313807	+17,423799	57
243 5651,5	+45,585657	-42,380276	-12,531466	57	243 5686,0	+40,631884	+38,911892	+18,779424	57
243 5652,0	+49,779194	-37,809990	-10,352680	57	243 5686,5	+34,986097	+42,967679	+19,873311	57
243 5652,5	+53,402688	-32,814507	-8,058822	57	243 5687,0	+28,839004	+46,411924	+20,684325	57
243 5653,0	+56,409671	-27,447249	-5,675082	57	243 5687,5	+22,268252	+49,181374	+21,194607	57
243 5653,5	+58,758970	-21,766228	-3,227973	57	243 5688,0	+15,361836	+51,220675	+21,390284	57
243 5654,0	+60,415077	-15,833783	-0,745177	57	243 5688,5	+8,217202	+52,484081	+21,262049	57
243 5654,5	+61,348636	-9,716364	+1,744566	57	243 5689,0	+0,940024	+52,937468	+20,805855	57
243 5655,0	+61,536961	-3,484289	+4,211611	57	243 5689,5	-6,357604	+52,560055	+20,023411	57
243 5655,5	+60,964614	+2,788573	+6,625580	57	243 5690,0	-13,559464	+51,345920	+18,922581	57
243 5656,0	+59,624074	+9,025145	+8,955555	57	243 5690,5	-20,547990	+49,305151	+17,517598	57
243 5656,5	+57,516437	+15,145638	+11,170345	57	243 5691,0	-27,207338	+46,464335	+15,828967	57
243 5657,0	+54,652193	+21,068155	+13,238771	57	243 5691,5	-33,426681	+42,866491	+13,883166	57
243 5657,5	+51,052045	+26,709512	+15,130090	57	243 5692,0	-39,103448	+38,570250	+11,712041	57
243 5658,0	+46,747596	+31,986232	+16,814416	57	243 5692,5	-44,146197	+33,648210	+9,351901	57
243 5658,5	+41,782102	+36,815845	+18,263324	57	243 5693,0	-48,477121	+28,184846	+6,842497	57
243 5659,0	+36,210928	+41,118406	+19,450460	57	243 5693,5	-52,033849	+22,273863	+4,225827	57
243 5659,5	+30,101851	+44,818358	+20,352319	57	243 5694,0	-54,770443	+16,015302	+1,544913	57
243 5660,0	+23,534855	+47,846495	+20,948990	57	243 5694,5	-56,657733	+9,512624	-1,157354	57
243 5660,5	+16,601613	+50,142247	+21,224996	57	243 5695,0	-57,682902	+2,869931	-3,839270	57
243 5661,0	+9,404251	+51,655860	+21,170053	57	243 5695,5	-57,848591	-3,810501	-6,461200	57
243 5661,5	+2,053627	+52,350608	+20,779772	57	243 5696,0	-57,171444	-10,430307	-8,986259	57
243 5662,0	-5,333055	+52,204603	+20,056154	57	243 5696,5	-55,680549	-16,896678	-11,380823	57
243 5662,5	-12,635149	+51,212241	+19,007908	57	243 5697,0	-53,415662	-23,123535	-13,614833	57
243 5663,0	-19,731822	+49,384995	+17,650444	57	243 5697,5	-50,425509	-29,032342	-15,661955	57
243 5663,5	-26,505495	+46,751438	+16,005591	57	243 5698,0	-46,766100	-34,552541	-17,499600	57
243 5664,0	-32,845221	+43,356595	+14,101033	57	243 5698,5	-42,499328	-39,621772	-19,108900	57
243 5664,5	-38,649746	+39,260453	+11,969435	57	243 5699,0	-37,691592	-44,185833	-20,474553	57
243 5665,0	-43,830065	+34,535977	+9,647453	57	243 5699,5	-32,412727	-48,198549	-21,584690	57
243 5665,5	-48,311287	+29,266569	+7,174558	57	243 5700,0	-26,735019	-51,621536	-22,430688	57
243 5666,0	-52,033866	+23,543444	+4,591891	57	243 5700,5	-20,732472	-54,423977	-23,007024	57
243 5666,5	-54,954003	+17,462820	+1,941138	57	243 5701,0	-14,480097	-56,582323	-23,311088	57
243 5667,0	-57,043529	+11,123354	+0,736478	57	243 5701,5	-8,053356	-58,080020	-23,343027	57
243 5667,5	-58,289202	+4,623817	-3,401042	57	243 5702,0	-1,527704	-58,907300	-23,105625	57
243 5668,0	-58,691684	-1,938914	-6,014630	57	243 5702,5	+5,021858	-59,060999	-22,604183	57
243 5668,5	-58,264264	-8,471449	-8,541837	57	243 5703,0	+11,521209	-58,544428	-21,846447	57
243 5669,0	-57,031438	-14,885142	-10,950127	57	243 5703,5	+17,897482	-57,367130	-20,842460	57
243 5669,5	-55,027559	-21,097015	-13,210078	57	243 5704,0	+24,079495	-55,544877	-19,604537	57
243 5670,0	-52,295386	-27,030375	-15,295495	57	243 5704,5	+29,998172	-53,099519	-18,147162	57
243 5670,5	-48,884919	-32,615255	-17,183470	57	243 5705,0	+35,586986	-50,058889	-16,486914	57
243 5671,0	-44,852159	-37,788621	-18,854358	57	243 5705,5	+40,782436	-46,456658	-14,642363	57
243 5671,5	-40,258134	-42,494511	-20,291730	57	243 5706,0	+45,524539	-42,332213	-12,633988	57
243 5672,0	-35,167966	-46,684059	-21,482317	57	243 5706,5	+49,757414	-37,730504	-10,484064	57
243 5672,5	-29,650060	-50,315458	-22,415896	57	243 5707,0	+53,429748	-32,701761	-8,216507	57
243 5673,0	-23,775367	-53,353906	-23,085222	57	243 5707,5	+56,495361	-27,301234	-5,856728	57
243 5673,5	-17,616787	-55,771587	-23,485946	57	243 5708,0	+58,913853	-21,588904	-3,431462	57
243 5674,0	-11,248497	-57,547556	-23,616530	57	243 5708,5	+60,650983	-15,629001	-0,968557	57
243 5674,5	-4,745409	-58,667607	-23,478125	57	243 5709,0	+61,679368	-9,489631	+1,503244	57
243 5675,0	+1,817369	-59,124319	-23,074561	57	243 5709,5	+61,978827	-3,242182	+3,954545	57
243 5675,5	+8,365071	-58,916906	-22,412220	57	243 5710,0	+61,536981	+3,039191	+6,355569	57
243 5676,0	+14,823813	-58,051034	-21,499934	57	243 5710,5	+60,349575	+9,278262	+8,676434	57
					243 5711,0	+58,420921	+15,397405	+10,887463	57

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z	J.D.	x	y	z		
243 5711,5	+55,764233	+21,318368	+12,959502	57	243 5746,5	-37,073922	+41,962445	+12,962286	57
243 5712,0	+52,401857	+26,963097	+14,864262	57	243 5747,0	-42,232840	+37,359687	+10,773020	57
243 5712,5	+48,365502	+32,254604	+16,574686	57	243 5747,5	-46,749808	+32,180988	+8,417543	57
243 5713,0	+43,696404	+37,117952	+18,065313	57	243 5748,0	-50,555275	+26,505053	+5,931810	57
243 5713,5	+38,445317	+41,481234	+19,312691	57	243 5748,5	-53,592108	+20,419439	+3,354099	57
243 5714,0	+32,672558	+45,276764	+20,295811	57	243 5749,0	-55,816877	+14,018613	+0,724177	57
243 5714,5	+26,447752	+48,442242	+20,996547	57	243 5749,5	-57,200806	+7,401831	+1,917606	57
243 5715,0	+19,849464	+50,921968	+21,400077	57	243 5750,0	-57,730199	+0,670828	+4,531226	57
243 5715,5	+12,964690	+52,668338	+21,495450	57	243 5750,5	-57,406409	+6,072499	+7,077877	57
243 5716,0	+5,887982	+53,643076	+21,275944	57	243 5751,0	-56,245340	-12,728351	+9,520776	57
243 5716,5	-1,279656	+53,818743	+20,739584	57	243 5751,5	-54,276357	-19,201080	-11,825876	57
243 5717,0	-8,432216	+53,179967	+19,889481	57	243 5752,0	-51,541031	-25,400949	-13,962416	57
243 5717,5	-15,460506	+51,724657	+18,734137	57	243 5752,5	-48,091524	-31,245559	-15,903340	57
243 5718,0	-22,254294	+49,464929	+17,287643	57	243 5753,0	-43,988857	-36,660918	-17,625547	57
243 5718,5	-28,704747	+46,427631	+15,569643	57	243 5753,5	-39,301140	-41,582098	-19,110014	57
243 5719,0	-34,707112	+42,654512	+13,605199	57	243 5754,0	-34,101858	-45,953615	-20,341773	57
243 5719,5	-40,163471	+38,201795	+11,424368	57	243 5754,5	-28,468273	-49,729447	-21,309795	57
243 5720,0	-44,985399	+33,139144	+9,061595	57	243 5755,0	-22,480013	-52,872903	-22,006818	57
243 5720,5	-49,096413	+27,548123	+6,554900	57	243 5755,5	-16,217850	-55,356225	-22,429091	57
243 5721,0	-52,434020	+21,520144	+3,944901	57	243 5756,0	-9,762704	-57,160224	-22,576149	57
243 5721,5	-54,951195	+15,153977	+1,273751	57	243 5756,5	-3,194804	-58,273694	-22,450516	57
243 5722,0	-56,617195	+8,553035	-1,416008	57	243 5757,0	+3,406943	-58,692977	-22,057482	57
243 5722,5	-57,417760	+1,822619	-4,082503	57	243 5757,5	+9,965466	-58,421247	-21,404868	57
243 5723,0	-57,354562	-4,932742	-6,685525	57	243 5758,0	+16,405897	-57,468975	-20,502803	57
243 5723,5	-56,444303	-11,611685	-9,187371	57	243 5758,5	+22,655898	-55,851768	-19,363588	57
243 5724,0	-54,717174	-18,118051	-11,553494	57	243 5759,0	+28,645893	-53,591846	-18,001523	57
243 5724,5	-52,215169	-24,362472	-13,752988	57	243 5759,5	+34,309298	-50,716858	-16,432800	57
243 5725,0	-48,990236	-30,263528	-15,758861	57	243 5760,0	+39,582782	-47,259968	-14,675421	57
243 5725,5	-45,102402	-35,748498	-17,548178	57	243 5760,5	+44,406483	-43,259591	-12,749103	57
243 5726,0	-40,618046	-40,753718	-19,102044	57	243 5761,0	+48,724352	-38,759402	-10,675232	57
243 5726,5	-35,608239	-45,224663	-20,405492	57	243 5761,5	+52,484509	-33,808213	-8,476794	57
243 5727,0	-30,147377	-49,115796	-21,447314	57	243 5762,0	+55,639694	-28,459898	-6,178296	57
243 5727,5	-24,311993	-52,390291	-22,219850	57	243 5762,5	+58,147740	-22,773256	-3,805697	57
243 5728,0	-18,179740	-55,019595	-22,718716	57	243 5763,0	+59,972221	-16,811877	-1,386272	57
243 5728,5	-11,828627	-56,983050	-22,942614	57	243 5763,5	+61,083124	-10,643897	+1,051511	57
243 5729,0	-5,336377	-58,267482	-22,893106	57	243 5764,0	+61,457498	-4,341621	+3,478217	57
243 5729,5	+1,220092	-58,866738	-22,574389	57	243 5764,5	+61,080270	+2,018949	+5,863673	57
243 5730,0	+7,765066	-58,781372	-21,993142	57	243 5765,0	+59,944913	+8,358746	+8,177267	57
243 5730,5	+14,224383	-58,018363	-21,158380	57	243 5765,5	+58,054272	+14,596464	+10,388347	57
243 5731,0	+20,525750	-56,590841	-20,081321	57	243 5766,0	+55,421026	+20,649503	+12,665955	57
243 5731,5	+26,599026	-54,517929	-18,775311	57	243 5766,5	+52,068309	+26,435158	+14,382548	57
243 5732,0	+32,376525	-51,824555	-17,255703	57	243 5767,0	+48,029954	+31,871880	+16,108091	57
243 5732,5	+37,793392	-48,541436	-15,539829	57	243 5767,5	+43,350546	+36,880667	+17,616992	57
243 5733,0	+42,787930	-44,704871	-13,646901	57	243 5768,0	+38,085332	+41,386582	+18,885470	57
243 5733,5	+47,302046	-40,356733	-11,597951	57	243 5768,5	+32,299729	+45,320208	+19,892707	57
243 5734,0	+51,281772	-35,544347	-9,415745	57	243 5769,0	+26,068626	+48,619178	+20,621360	57
243 5734,5	+54,677748	-30,320317	-7,124681	57	243 5769,5	+19,475381	+51,229525	+21,058002	57
243 5735,0	+57,445823	-24,742342	-4,750662	57	243 5770,0	+12,610577	+53,106889	+21,193466	57
243 5735,5	+59,547703	-18,872957	-2,320940	57	243 5770,5	+5,570592	+54,217667	+21,023156	57
243 5736,0	+60,951590	-12,779151	+0,136081	57	243 5771,0	-1,544043	+54,539733	+20,547195	57
243 5736,5	+61,632762	-6,531914	+2,591082	57	243 5771,5	-8,630352	+54,063194	+19,770551	57
243 5737,0	+61,574316	-0,205667	+5,014082	57	243 5772,0	-15,584753	+52,790612	+18,702968	57
243 5737,5	+60,767686	+6,122421	+7,374775	57	243 5772,5	-22,304876	+50,737126	+17,358873	57
243 5738,0	+59,213165	+12,373238	+9,642861	57	243 5773,0	-28,691397	+47,930345	+15,757155	57
243 5738,5	+56,920378	+18,466612	+11,788432	57	243 5773,5	-34,649827	+44,409941	+13,920875	57
243 5739,0	+53,908566	+24,322315	+13,782371	57	243 5774,0	-40,092154	+40,226929	+11,876847	57
243 5739,5	+50,206771	+29,861119	+15,596791	57	243 5774,5	-44,938481	+35,442921	+9,655223	57
243 5740,0	+45,853935	+35,005952	+17,205463	57	243 5775,0	-49,118412	+30,128986	+7,288923	57
243 5740,5	+40,898733	+39,683030	+18,584257	57	243 5775,5	-52,572324	+24,364401	+4,813081	57
243 5741,0	+35,399298	+43,823072	+19,711565	57	243 5776,0	-55,252446	+18,235240	+2,264390	57
243 5741,5	+29,422824	+47,362489	+20,568730	57	243 5776,5	-57,123579	+11,832730	-0,319568	57
243 5742,0	+23,044898	+50,244513	+21,140418	57	243 5777,0	-58,163730	+5,251599	-2,900996	57
243 5742,5	+16,348791	+52,420408	+21,415023	57	243 5777,5	-58,364313	+1,411732	-5,442605	57
243 5743,0	+9,244455	+53,850496	+21,384971	57	243 5778,0	-57,730095	+8,060955	-7,908276	57
243 5743,5	+2,367417	+54,505182	+21,047017	57	243 5778,5	-56,278756	-14,601635	-10,263702	57
243 5744,0	-4,722523	+54,365874	+20,402483	57	243 5779,0	-54,040327	-20,942905	-12,476971	57
243 5744,5	-11,742766	+53,425767	+19,457440	57	243 5779,5	-51,056104	-26,998978	-14,519061	57
243 5745,0	-18,589581	+51,690454	+18,222793	57	243 5780,0	-47,377549	-32,690499	-16,364249	57
243 5745,5	-25,159893	+49,178350	+16,714290	57	243 5780,5	-43,064842	-37,945582	-17,990394	57
243 5746,0	-31,353264	+45,920911	+14,952444	57	243 5781,0	-38,185527	-42,700723	-19,379155	57

J.D.	x	y	z	J.D.	x	y	z		
243 5781,5	-32,812839	-46,901248	-20,516015	57	243 5816,5	+54,928525	-30,802246	-7,031146	57
243 5782,0	-27,024345	-50,501699	-21,390331	57	243 5817,0	+57,719238	-25,337970	-4,729597	57
243 5782,5	-20,900444	-53,465831	-21,995187	57	243 5817,5	+59,842203	-19,583397	-2,374488	57
243 5783,0	-14,523093	-55,766519	-22,327260	57	243 5818,0	+61,266545	-13,601649	+0,007750	57
243 5783,5	-7,974649	-57,385400	-22,386586	57	243 5818,5	+61,967357	-7,459398	+2,389853	57
243 5784,0	-1,336890	-58,312561	-22,176349	57	243 5819,0	+61,926237	-1,226703	+4,743823	57
243 5784,5	+5,309840	-58,545898	-21,702579	57	243 5819,5	+61,131788	+5,023253	+7,041065	57
243 5785,0	+11,887251	-58,090784	-20,973966	57	243 5820,0	+59,580220	+11,214457	+9,252560	57
243 5785,5	+18,319668	-56,959404	-20,001550	57	243 5820,5	+57,276133	+17,268530	+11,349098	57
243 5786,0	+24,534425	-55,170399	-18,798567	57	243 5821,0	+54,233242	+23,105332	+13,301564	57
243 5786,5	+30,462142	-52,748281	-17,380200	57	243 5821,5	+50,475100	+28,643751	+15,081298	57
243 5787,0	+36,037019	-49,723200	-15,763459	57	243 5822,0	+46,035887	+33,802758	+16,660566	57
243 5787,5	+41,197017	-46,130568	-13,967027	57	243 5822,5	+40,960977	+38,502695	+18,013084	57
243 5788,0	+45,884062	-42,010796	-12,011144	57	243 5823,0	+35,307382	+42,666849	+19,114648	57
243 5788,5	+50,044262	-37,409147	-9,917526	57	243 5823,5	+29,143844	+46,223221	+19,943815	57
243 5789,0	+53,628119	-32,375531	-7,709279	57	243 5824,0	+22,550549	+49,106486	+20,482618	57
243 5789,5	+56,590887	-26,964478	-5,410847	57	243 5824,5	+15,618433	+51,260104	+20,717306	57
243 5790,0	+58,892892	-21,234981	-3,047930	57	243 5825,0	+8,447881	+52,638365	+20,638999	57
243 5790,5	+60,500079	-15,250425	-0,647419	57	243 5825,5	+1,146943	+53,208228	+20,244253	57
243 5791,0	+61,384442	-9,078407	+1,762727	57	243 5826,0	-6,170982	+52,950951	+19,535460	57
243 5791,5	+61,524777	-2,790546	+4,153601	57	243 5826,5	-13,389829	+51,863200	+18,521050	57
243 5792,0	+60,907340	+3,537853	+6,495539	57	243 5827,0	-20,393833	+49,957552	+17,215445	57
243 5792,5	+59,526626	+9,828269	+8,758365	57	243 5827,5	-27,070562	+47,262445	+15,638769	57
243 5793,0	+57,386237	+15,999590	+10,911698	57	243 5828,0	-33,313848	+43,821472	+13,816350	57
243 5793,5	+54,499585	+21,968972	+12,925331	57	243 5828,5	-39,026396	+39,692047	+11,777985	57
243 5794,0	+50,890707	+27,652911	+14,769718	57	243 5829,0	-44,121968	+34,943653	+9,557115	57
243 5794,5	+46,594716	+32,968489	+16,416474	57	243 5829,5	-48,527068	+29,655781	+7,189884	57
243 5795,0	+41,658301	+37,834969	+17,839018	57	243 5830,0	-52,182042	+23,915641	+4,714197	57
243 5795,5	+36,139681	+42,175385	+19,013188	57	243 5830,5	-55,041631	+17,815859	+2,168798	57
243 5796,0	+30,108387	+45,918418	+19,917903	57	243 5831,0	-57,075043	+11,452265	-0,407567	57
243 5796,5	+23,644593	+49,000215	+20,535819	57	243 5831,5	-58,265654	+4,921832	-2,976904	57
243 5797,0	+16,837989	+51,366196	+20,853907	57	243 5832,0	-58,610387	-1,679143	-5,502610	57
243 5797,5	+9,786312	+52,972704	+20,863951	57	243 5832,5	-58,118783	-8,256634	-7,949988	57
243 5798,0	+2,593450	+53,788355	+20,562893	57	243 5833,0	-56,812085	-14,720201	-10,286676	57
243 5798,5	-4,632685	+53,795100	+19,953066	57	243 5833,5	-54,722094	-20,984092	-12,482957	57
243 5799,0	-11,782487	+52,988796	+19,042200	57	243 5834,0	-51,890105	-26,968138	-14,512014	57
243 5799,5	-18,747063	+51,379483	+17,843328	57	243 5834,5	-48,365765	-32,598447	-16,350098	57
243 5800,0	-25,420583	+48,991064	+16,374472	57	243 5835,0	-44,206011	-37,807999	-17,976653	57
243 5800,5	-31,702517	+45,860747	+14,658221	57	243 5835,5	-39,473922	-42,536996	-19,374362	57
243 5801,0	-37,499545	+42,037926	+12,721170	57	243 5836,0	-34,237771	-46,733249	-20,529203	57
243 5801,5	-42,727346	+37,583066	+10,593335	57	243 5836,5	-28,570004	-50,352364	-21,430439	57
243 5802,0	-47,311910	+32,566155	+8,307454	57	243 5837,0	-22,546253	-53,357877	-22,070593	57
243 5802,5	-51,190607	+27,065124	+5,898297	57	243 5837,5	-16,244441	-55,721327	-22,445383	57
243 5803,0	-54,312965	+21,164224	+3,402000	57	243 5838,0	-9,743845	-57,422211	-22,553639	57
243 5803,5	-56,641062	+14,952302	+0,855371	57	243 5838,5	-3,124268	-58,447905	-22,397205	57
243 5804,0	-58,149759	+8,521217	-1,704737	57	243 5839,0	+3,534802	-58,793532	-21,980811	57
243 5804,5	-58,826636	+1,964206	-4,242022	57	243 5839,5	+10,154953	-58,461742	-21,311938	57
243 5805,0	-58,671709	-4,625616	-6,721288	57	243 5840,0	+16,659567	-57,462310	-20,400588	57
243 5805,5	-57,697056	-11,156685	-9,108946	57	243 5840,5	+22,974490	-55,812000	-19,259197	57
243 5806,0	-55,926101	-17,540316	-11,373458	57	243 5841,0	+29,028587	-53,534013	-17,902370	57
243 5806,5	-53,392960	-23,691921	-13,485741	57	243 5841,5	+34,754286	-50,657681	-16,346715	57
243 5807,0	-50,141485	-29,532098	-15,419499	57	243 5842,0	+40,088029	-47,218046	-14,610663	57
243 5807,5	-46,224288	-34,987576	-17,151495	57	243 5842,5	+44,970628	-43,255380	-12,714243	57
243 5808,0	-41,701680	-39,992036	-18,661771	57	243 5843,0	+49,347667	-38,814874	-10,678942	57
243 5808,5	-36,640508	-44,486789	-19,933805	57	243 5843,5	+53,169672	-33,946102	-8,527484	57
243 5809,0	-31,112933	-48,421240	-20,954588	57	243 5844,0	+56,392484	-28,702773	-6,283707	57
243 5809,5	-25,195221	-51,753184	-21,714626	57	243 5844,5	+58,977433	-23,142315	-3,972400	57
243 5810,0	-18,966615	-54,449110	-22,207961	57	243 5845,0	+60,891508	-17,325546	-1,619149	57
243 5810,5	-12,508086	-56,484037	-22,432000	57	243 5845,5	+62,107699	-11,316424	+0,749765	57
243 5811,0	-5,901320	-57,841520	-22,387439	57	243 5846,0	+62,605159	-5,181727	+3,107513	57
243 5811,5	+0,772294	-58,513343	-22,078054	57	243 5846,5	+62,369591	+1,009204	+5,426835	57
243 5812,0	+7,432557	-58,499227	-21,510511	57	243 5847,0	+61,393524	+7,184752	+7,680177	57
243 5812,5	+14,001215	-57,806351	-20,694139	57	243 5847,5	+59,676746	+13,271357	+9,839836	57
243 5813,0	+20,402619	-56,448941	-19,640694	57	243 5848,0	+57,226872	+19,193899	+11,878171	57
243 5813,5	+26,564272	-54,447826	-18,364167	57	243 5848,5	+54,059720	+24,876168	+13,767783	57
243 5814,0	+32,417225	-51,829859	-16,880526	57	243 5849,0	+50,200045	+30,241487	+15,481830	57
243 5814,5	+37,896484	-48,627598	-15,207541	57	243 5849,5	+45,682035	+35,213483	+16,994342	57
243 5815,0	+42,941267	-44,878831	-13,364612	57	243 5850,0	+40,549902	+39,717046	+18,280631	57
243 5815,5	+47,495201	-40,626172	-11,372586	57	243 5850,5	+34,858363	+43,679519	+19,317777	57
243 5816,0	+51,506578	-35,916826	-9,253638	57	243 5851,0	+28,673003	+47,032188	+20,085222	57

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z	J.D.	x	y	z	
243 5851,5	+22,070267	+49,711886	+20,565360	57	243 5886,5	-56,723769	+ 0,933448 - 3,927966	57
243 5852,0	+15,137242	+51,662931	+20,744261	57	243 5887,0	-56,575422	- 5,920260 - 6,475549	57
243 5852,5	+ 7,970904	+52,839103	+20,612340	57	243 5887,5	-55,557700	-12,677644 - 8,920685	57
243 5853,0	+ 0,676886	+53,205724	+20,165061	57	243 5888,0	-53,704478	-19,238694 -11,228697	57
243 5853,5	- 6,632362	+52,741536	+19,403476	57	243 5888,5	-51,062012	-25,511236 -13,368783	57
243 5854,0	-13,839943	+51,440408	+18,334686	57	243 5889,0	-47,686843	-31,412067 -15,314290	57
243 5854,5	-20,827412	+49,312505	+16,972052	57	243 5889,5	-43,643771	-36,867706 -17,042833	57
243 5855,0	-27,478007	+46,384841	+15,335135	57	243 5890,0	-39,003796	-41,814594 -18,536203	57
243 5855,5	-33,680062	+42,701196	+13,449391	57	243 5890,5	-33,842516	-46,199172 -19,780281	57
243 5856,0	-39,330333	+38,321157	+11,345545	57	243 5891,0	-28,238534	-49,977586 -20,764793	57
243 5856,5	-44,336953	+33,318442	+ 9,058724	57	243 5891,5	-22,272229	-53,115273 -21,483070	57
243 5857,0	-48,621892	+27,778660	+ 6,627407	57	243 5892,0	-16,024737	-55,586585 -21,931820	57
243 5857,5	-52,122732	+21,796616	+ 4,092282	57	243 5892,5	- 9,577082	-57,374249 -22,110863	57
243 5858,0	-54,793635	+15,473369	+ 1,495057	57	243 5893,0	- 3,009501	-58,468860 -22,022878	57
243 5858,5	-56,605570	+ 8,913327	- 1,122663	57	243 5893,5	+ 3,599118	-58,868427 -21,673206	57
243 5859,0	-57,545919	+ 2,221486	- 3,720360	57	243 5894,0	+10,171696	-58,578018 -21,069662	57
243 5859,5	-57,617528	- 4,498965	- 6,259457	57	243 5894,5	+16,633375	-57,609327 -20,222362	57
243 5860,0	-56,837366	-11,148712	- 8,703963	57	243 5895,0	+22,911877	-55,980346 -19,143550	57
243 5860,5	-55,234964	-17,633898	-11,020963	57	243 5895,5	+28,937885	-53,715143 -17,847499	57
243 5861,0	-52,850775	-23,867326	-13,180923	57	243 5896,0	+34,645348	-50,843473 -16,350343	57
243 5861,5	-49,734545	-29,769306	-15,157885	57	243 5896,5	+39,971877	-47,400649 -14,669980	57
243 5862,0	-45,943682	-35,268147	-16,929511	57	243 5897,0	+44,859099	-43,427194 -12,825932	57
243 5862,5	-41,541925	-40,300490	-18,477105	57	243 5897,5	+49,252995	-38,968602 -10,839220	57
243 5863,0	-36,597908	-44,811326	-19,785509	57	243 5898,0	+53,104369	-34,075076 - 8,732231	57
243 5863,5	-31,184141	-48,754077	-20,843034	57	243 5898,5	+56,369142	-28,801178 - 6,528570	57
243 5864,0	-25,375877	-52,090350	-21,641287	57	243 5899,0	+59,008900	-23,205537 - 4,252909	57
243 5864,5	-19,250295	-54,789848	-22,175069	57	243 5899,5	+60,991126	-17,350401 - 1,930804	57
243 5865,0	-12,885693	-56,830173	-22,442236	57	243 5900,0	+62,289701	-11,301240 + 0,411498	57
243 5865,5	- 6,360747	-58,196527	-22,443511	57	243 5900,5	+62,885202	- 5,126266 + 2,747247	57
243 5866,0	+ 0,204698	-58,881593	-22,182410	57	243 5901,0	+62,765245	+ 1,104098 + 5,049431	57
243 5866,5	+ 6,857260	-58,885256	-21,665074	57	243 5901,5	+61,924791	+ 7,317762 + 7,290968	57
243 5867,0	+13,396582	-58,214348	-20,900135	57	243 5902,0	+60,366345	+13,441570 + 9,444987	57
243 5867,5	+19,789897	-56,882507	-19,898605	57	243 5902,5	+58,100217	+19,401904 +11,485030	57
243 5868,0	+25,965532	-54,909763	-18,673698	57	243 5903,0	+55,144708	+25,125373 +13,385349	57
243 5868,5	+31,854825	-52,322355	-17,240699	57	243 5903,5	+51,526213	+30,539486 +15,121135	57
243 5869,0	+37,392598	-49,152411	-15,616816	57	243 5904,0	+47,279268	+35,573356 +16,668814	57
243 5869,5	+42,517618	-45,437608	-13,821017	57	243 5904,5	+42,446684	+40,158496 +18,006320	57
243 5870,0	+47,173065	-41,220873	-11,873865	57	243 5905,0	+37,079468	+44,229600 +19,113390	57
243 5870,5	+51,306872	-36,549939	- 9,797357	57	243 5905,5	+31,236817	+47,725450 +19,971900	57
243 5871,0	+54,872159	-31,477016	- 7,614728	57	243 5906,0	+24,985924	+50,589817 +20,566161	57
243 5871,5	+57,827554	-26,058359	- 5,350297	57	243 5906,5	+18,401792	+52,772559 +20,883335	57
243 5872,0	+60,137525	-20,353876	- 3,029270	57	243 5907,0	+11,566787	+54,230602 +20,913745	57
243 5872,5	+61,772617	-14,426664	- 0,677573	57	243 5907,5	+ 4,570118	+54,929220 +20,651306	57
243 5873,0	+62,709772	- 8,342626	+ 1,678341	57	243 5908,0	- 2,492970	+54,843142 +20,093887	57
243 5873,5	+62,932542	- 2,170027	+ 4,011664	57	243 5908,5	- 9,522231	+53,957867 +19,243711	57
243 5874,0	+62,431344	+ 4,020932	+ 6,295400	57	243 5909,0	-16,413784	+52,270784 +18,107649	57
243 5874,5	+61,203699	+10,158550	+ 8,502569	57	243 5909,5	-23,061783	+49,792211 +16,697500	57
243 5875,0	+59,254532	+16,170087	+10,606379	57	243 5910,0	-29,360469	+46,546361 +15,030174	57
243 5875,5	+56,596339	+21,982225	+12,580419	57	243 5910,5	-35,206526	+42,571808 +13,127692	57
243 5876,0	+53,249566	+27,521610	+14,398896	57	243 5911,0	-40,501667	+37,921589 +11,017024	57
243 5876,5	+49,242885	+32,715449	+16,036859	57	243 5911,5	-45,155411	+32,662856 + 8,729760	57
243 5877,0	+44,613504	+37,492159	+17,470491	57	243 5912,0	-49,087747	+26,875777 + 6,301502	57
243 5877,5	+39,407482	+41,782198	+18,677406	57	243 5912,5	-52,231737	+20,651995 + 3,771092	57
243 5878,0	+33,679987	+45,518979	+19,637043	57	243 5913,0	-54,535581	+14,092383 + 1,179640	57
243 5878,5	+27,495478	+48,639989	+20,331070	57	243 5913,5	-55,964252	+ 7,304398 - 1,430585	57
243 5879,0	+20,927718	+51,087997	+20,743848	57	243 5914,0	-56,500279	+ 0,399095 - 4,017301	57
243 5879,5	+14,059661	+52,812603	+20,863001	57	243 5914,5	-56,143951	- 6,511938 - 6,539378	57
243 5880,0	+ 6,982937	+53,771694	+20,679906	57	243 5915,0	-54,912593	-13,319546 - 8,957864	57
243 5880,5	- 0,202911	+53,933224	+20,190306	57	243 5915,5	-52,839363	-19,919706 -11,236887	57
243 5881,0	- 7,391692	+53,276899	+19,394842	57	243 5916,0	-49,971388	-26,215760 -13,344355	57
243 5881,5	-14,472280	+51,795825	+18,299526	57	243 5916,5	-46,367640	-32,120113 -15,252413	57
243 5882,0	-21,330846	+49,497871	+16,916081	57	243 5917,0	-42,096732	-37,555493 -16,937731	57
243 5882,5	-27,853563	+46,406758	+15,262147	57	243 5917,5	-37,234521	-42,455500 -18,381551	57
243 5883,0	-33,929665	+42,562515	+13,361204	57	243 5918,0	-31,862075	-46,764897 -19,569621	57
243 5883,5	-39,454721	+38,021285	+11,242255	57	243 5918,5	-26,063717	-50,439457 -20,491994	57
243 5884,0	-44,333881	+32,854408	+ 8,939235	57	243 5919,0	-19,925360	-53,445512 -21,142749	57
243 5884,5	-48,484906	+27,146748	+ 6,490141	57	243 5919,5	-13,533168	-55,759383 -21,519657	57
243 5885,0	-51,840636	+20,994307	+ 3,935966	57	243 5920,0	- 6,972460	-57,366717 -21,623867	57
243 5885,5	-54,350883	+14,501381	+ 1,319483	57	243 5920,5	- 0,326852	-58,261775 -21,459575	57
243 5886,0	-55,983322	+ 7,777345	- 1,316025	57	243 5921,0	+ 6,322383	-58,446695 -21,033701	57

J.D.	x	y	z	J.D.	x	y	z		
243 5921,5	+12,896806	-57,930953	-20,355652	57	243 5956,5	+60,155424	+12,585303	+ 9,077981	57
243 5922,0	+19,321148	-56,730639	-19,437036	57	243 5957,0	+57,913901	+18,626751	+11,113178	57
243 5922,5	+25,523603	-54,868055	-18,291480	57	243 5957,5	+54,968477	+24,445589	+13,014426	57
243 5923,0	+31,436061	-52,371295	-16,934464	57	243 5958,0	+51,346024	+29,966033	+14,756114	57
243 5923,5	+36,994283	-49,273809	-15,383147	57	243 5958,5	+47,082616	+35,113790	+16,313858	57
243 5924,0	+42,138149	-45,614189	-13,656257	57	243 5959,0	+42,223631	+39,817190	+17,664938	57
243 5924,5	+46,811827	-41,435827	-11,773963	57	243 5959,5	+36,823566	+44,008281	+18,788675	57
243 5925,0	+50,964093	-36,786749	- 9,757783	57	243 5960,0	+30,945885	+47,624167	+19,666908	57
243 5925,5	+54,548583	-31,719353	- 7,630463	57	243 5960,5	+24,662383	+50,608133	+20,284356	57
243 5926,0	+57,524116	-26,290155	- 5,415867	57	243 5961,0	+18,052559	+52,910923	+20,629032	57
243 5926,5	+59,855114	-20,559572	- 3,138865	57	243 5961,5	+11,202635	+54,491867	+20,692589	57
243 5927,0	+61,511970	-14,591588	- 0,825179	57	243 5962,0	+ 4,204421	+55,319869	+20,470581	57
243 5927,5	+62,471480	- 8,453395	+ 1,498787	57	243 5962,5	- 2,845998	+55,374311	+19,962711	57
243 5928,0	+62,717307	- 2,214969	+ 3,806120	57	243 5963,0	- 9,849721	+54,645774	+19,172961	57
243 5928,5	+62,240339	+ 4,051446	+ 6,069631	57	243 5963,5	-16,706623	+53,136480	+18,109662	57
243 5929,0	+61,039206	+10,271923	+ 8,262102	57	243 5964,0	-23,317007	+50,860654	+16,785473	57
243 5929,5	+59,120464	+16,371526	+10,356542	57	243 5964,5	-29,583346	+47,844594	+15,217301	57
243 5930,0	+56,499054	+22,275055	+12,326507	57	243 5965,0	-35,411971	+44,126455	+13,426076	57
243 5930,5	+53,198405	+27,907877	+14,146407	57	243 5965,5	-40,714817	+39,755930	+11,436506	57
243 5931,0	+49,250562	+33,196781	+15,791817	57	243 5966,0	-45,411035	+34,793560	+ 9,276720	57
243 5931,5	+44,696253	+38,070946	+17,239849	57	243 5966,5	-49,428665	+29,309973	+ 6,977849	57
243 5932,0	+39,584691	+42,462868	+18,469484	57	243 5967,0	-52,705972	+23,384684	+ 4,573488	57
243 5932,5	+33,973412	+46,309366	+19,461898	57	243 5967,5	-55,192841	+17,104867	+2,099161	57
243 5933,0	+27,927881	+49,552573	+20,200821	57	243 5968,0	-56,851873	+10,563803	- 0,408350	57
243 5933,5	+21,521017	+52,140897	+20,672846	57	243 5968,5	-57,659107	+ 3,859142	- 2,911669	57
243 5934,0	+14,832585	+54,030039	+20,867748	57	243 5969,0	-57,604726	- 2,908919	- 5,373560	57
243 5934,5	+ 7,948437	+55,183937	+20,778779	57	243 5969,5	-56,693146	- 9,639612	- 7,757641	57
243 5935,0	+ 0,959604	+55,575632	+20,402903	57	243 5970,0	-54,942949	-16,233614	-10,029127	57
243 5935,5	- 6,038735	+55,188157	+19,741064	57	243 5970,5	-52,386262	-22,594978	-12,155475	57
243 5936,0	-12,948458	+54,015338	+18,798369	57	243 5971,0	-49,067992	-28,633027	-14,107014	57
243 5936,5	-19,669900	+52,062468	+17,584244	57	243 5971,5	-45,044539	-34,264001	-15,857466	57
243 5937,0	-26,103340	+49,346776	+16,112480	57	243 5972,0	-40,382340	-39,412488	-17,384334	57
243 5937,5	-32,150787	+45,897963	+14,401301	57	243 5972,5	-35,156174	-44,012551	-18,669205	57
243 5938,0	-37,177761	+41,758164	+12,473212	57	243 5973,0	-29,447356	-48,008493	-19,697889	57
243 5938,5	-42,715354	+36,981970	+10,354857	57	243 5973,5	-23,341912	-51,355347	-20,460443	57
243 5939,0	-47,062230	+31,635866	+ 8,076663	57	243 5974,0	-16,928771	-54,018966	-20,951095	57
243 5939,5	-50,686679	+25,797438	+ 5,672382	57	243 5974,5	-10,298125	-55,975928	-21,168063	57
243 5940,0	-53,528619	+19,554135	+ 3,178512	57	243 5975,0	- 3,539880	-57,213042	-21,113277	57
243 5940,5	-55,541247	+13,001602	+ 0,633535	57	243 5975,5	+ 3,257572	-57,726900	-20,792113	57
243 5941,0	-56,692512	+ 6,241683	-1,922898	57	243 5976,0	+10,008475	-57,523085	-20,213017	57
243 5941,5	-56,965996	- 0,619900	- 4,450899	57	243 5976,5	+16,630538	-56,615454	-19,387198	57
243 5942,0	-56,361500	- 7,476063	- 6,911297	57	243 5977,0	+23,045607	-55,025343	-18,328265	57
243 5942,5	-54,894761	-14,220924	- 9,266560	57	243 5977,5	+29,180133	-52,780843	-17,051948	57
243 5943,0	-52,596847	-20,752318	-11,481662	57	243 5978,0	+34,965489	-49,916029	-15,575779	57
243 5943,5	-49,512955	-26,974073	-13,524834	57	243 5978,5	+40,338208	-46,470371	-13,918874	57
243 5944,0	-45,700703	-32,797949	-15,368141	57	243 5979,0	+45,240093	-42,488141	-12,101698	57
243 5944,5	-41,228241	-38,145194	-16,987901	57	243 5979,5	+49,618335	-38,017963	-10,145897	57
243 5945,0	-36,172069	-42,947580	-18,364922	57	243 5980,0	+53,425547	-33,112386	- 8,074137	57
243 5945,5	-30,614931	-47,148061	-19,484552	57	243 5980,5	+56,619926	-27,827593	- 5,909994	57
243 5946,0	-24,643721	-50,700931	-20,336613	57	243 5981,0	+59,165269	-22,223087	- 3,677826	57
243 5946,5	-18,347608	-53,571737	-20,915204	57	243 5981,5	+61,031144	-16,361449	- 1,402683	57
243 5947,0	-11,816344	-55,736752	-21,218389	57	243 5982,0	+62,193195	-10,308160	+ 0,889782	57
243 5947,5	- 5,138895	-57,182432	-21,247904	57	243 5982,5	+62,633304	- 4,131331	+ 3,173426	57
243 5948,0	+ 1,597700	-57,904618	-21,008758	57	243 5983,0	+62,340007	+ 2,098538	+5,421737	57
243 5948,5	+ 8,309203	-57,907799	-20,508925	57	243 5983,5	+61,308886	+ 8,308879	+ 7,607965	57
243 5949,0	+14,914816	-57,204224	-19,758946	57	243 5984,0	+59,543016	+14,425456	+ 9,705318	57
243 5949,5	+21,337677	-55,813279	-18,771678	57	243 5984,5	+57,053486	+20,372867	+11,687177	57
243 5950,0	+27,505144	-53,760683	-17,561977	57	243 5985,0	+53,859930	+26,075224	+13,527371	57
243 5950,5	+33,349036	-51,077967	-16,146481	57	243 5985,5	+49,990866	+31,456886	+15,200493	57
243 5951,0	+38,805786	-47,801948	-14,543417	57	243 5986,0	+45,484223	+36,443477	+16,682285	57
243 5951,5	+43,816550	-43,974285	-12,772422	57	243 5986,5	+40,387534	+40,962985	+17,950059	57
243 5952,0	+48,327306	-39,641132	-10,854410	57	243 5987,0	+34,758059	+44,947044	+18,983180	57
243 5952,5	+52,289050	-34,852902	- 8,811473	57	243 5987,5	+28,662589	+48,332266	+19,763532	57
243 5953,0	+55,657867	-29,663933	- 6,666743	57	243 5988,0	+22,177102	+51,061801	+20,276054	57
243 5953,5	+58,395220	-24,132340	- 4,444335	57	243 5988,5	+15,385977	+53,086736	+20,509200	57
243 5954,0	+60,468196	-18,319777	- 2,169218	57	243 5989,0	+ 8,380963	+54,367548	+20,455388	57
243 5954,5	+61,849839	-12,291201	+ 0,132879	57	243 5989,5	+ 1,259832	+54,875461	+20,111392	57
243 5955,0	+62,519531	- 6,114613	+ 2,435600	57	243 5990,0	- 5,875316	+54,593460	+19,478589	57
243 5955,5	+62,463460	+ 0,139291	+ 4,712111	57	243 5990,5	-12,919929	+53,517125	+18,563117	57
243 5956,0	+61,675041	+ 6,397516	+ 6,935299	57	243 5991,0	-19,769063	+51,655210	+17,375946	57

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z	J.D.	x	y	z		
243 5991,5	-26,319535	+49,029656	+15,932711	57	243 6016,5	+ 6,598822	+54,192982	+20,266157	58
243 5992,0	-32,472034	+45,675407	+14,253488	57	243 6017,0	- 0,593365	+54,412405	+19,829386	58
243 5992,5	-38,133194	+41,639854	+12,362449	57	243 6017,5	- 7,777565	+53,827435	+19,100260	58
243 5993,0	-43,217449	+36,981881	+10,287368	57	243 6018,0	-14,844588	+52,435414	+18,085650	58
243 5993,5	-47,648700	+31,770701	+ 8,059073	57	243 6018,5	-21,684517	+50,248051	+16,797697	58
243 5994,0	-51,361667	+26,084415	+ 5,710826	57	243 6019,0	-28,189293	+47,291742	+15,253752	58
243 5994,5	-54,303052	+20,008494	+ 3,277687	57	243 6019,5	-34,255394	+43,607378	+13,476110	58
243 5995,0	-56,432311	+13,634076	+ 0,795830	57	243 6020,0	-39,786421	+39,249617	+11,491561	58
243 5995,5	-57,722168	+ 7,056212	- 1,698122	57	243 6020,5	-44,695459	+34,285652	+ 9,330767	58
243 5996,0	-58,158836	+ 0,372120	- 4,167762	57	243 6021,0	-48,907018	+28,793510	+ 7,027517	58
243 5996,5	-57,742024	- 6,320543	- 6,577517	57	243 6021,5	-52,358704	+22,860159	+ 4,617897	58
243 5997,0	-56,484522	-12,925370	- 8,893242	57	243 6022,0	-55,002180	+16,579279	+ 2,139440	58
243 5997,5	-54,411823	-19,348802	-11,082756	57	243 6022,5	-56,803766	+10,049036	- 0,369754	58
243 5998,0	-51,561275	-25,501625	-13,116345	57	243 6023,0	-57,744646	+ 3,369905	- 2,871801	58
243 5998,5	-47,981138	-31,300306	-14,967159	57	243 6023,5	-57,820447	- 3,357457	- 5,329796	58
243 5999,0	-43,729537	-36,668223	-16,611600	57	243 6024,0	-57,040753	-10,034089	- 7,708441	58
243 5999,5	-38,873158	-41,536691	-18,029578	57	243 6024,5	-55,428129	-16,564423	- 9,974607	58
243 6000,0	-33,485887	-45,845776	-19,204724	57	243 6025,0	-53,017096	-22,857735	-12,097774	58
243 6000,5	-27,647374	-49,544924	-20,124507	57	243 6025,5	-49,852910	-28,829314	-14,050388	58
243 6001,0	-21,441542	-52,593348	-20,780258	57	243 6026,0	-45,990399	-34,401532	-15,808136	58
243 6001,5	-14,955142	-54,960254	-21,167150	57	243 6026,5	-41,492507	-39,504523	-17,350112	58
243 6002,0	- 8,276311	-56,624795	-21,284080	57	243 6027,0	-36,429150	-44,076876	-18,658980	58
243 6002,5	- 1,493233	-57,575833	-21,133475	57	243 6027,5	-30,875805	-48,066001	-19,721002	58
243 6003,0	+ 5,307056	-57,811631	-20,721092	57	243 6028,0	-24,912295	-51,428422	-20,526056	58
243 6003,5	+12,039765	-57,339259	-20,055733	57	243 6028,5	-18,621559	-54,129932	-21,067610	58
243 6004,0	+18,623267	-56,174084	-19,148973	57	243 6029,0	-12,088452	-56,145571	-21,342621	58
243 6004,5	+24,979854	-54,339025	-18,014851	57	243 6029,5	- 5,398639	-57,459570	-21,351434	58
243 6005,0	+31,036353	-51,863881	-16,669568	57	243 6030,0	+ 1,362478	-58,065093	-21,097621	58
243 6005,5	+36,724581	-48,784640	-15,131206	57	243 6030,5	+ 8,110757	-57,963970	-20,587797	58
243 6006,0	+41,981696	-45,142815	-13,419462	57	243 6031,0	+14,764207	-57,166244	-19,831412	58
243 6006,5	+46,750430	-40,984801	-11,555388	57	243 6031,5	+21,243818	-55,689804	-18,840538	58
243 6007,0	+50,979206	-36,361285	- 9,561183	57	243 6032,0	+27,474276	-53,559757	-17,629613	58
243 6007,5	+54,622331	-31,326814	- 7,460016	57	243 6032,5	+33,384555	-50,807879	-16,215168	58
243 6008,0	+57,639948	-25,939267	- 5,275835	57	243 6033,0	+38,908487	-47,472083	-14,615629	58
243 6008,5	+59,998243	-20,259548	- 3,033246	57	243 6033,5	+43,985130	-43,595738	-12,851015	58
243 6009,0	+61,669366	-14,351206	- 0,757380	57	243 6034,0	+48,559129	-39,227109	-10,942723	58
243 6009,5	+62,631717	- 8,280193	+ 1,526217	57	243 6034,5	+52,580954	-34,418780	- 8,913303	58
243 6010,0	+62,870006	- 2,114581	+ 3,791693	57	243 6035,0	+56,007094	-29,227088	- 6,786232	58
243 6010,5	+62,375448	+ 4,075706	+ 6,012987	57	243 6035,5	+58,800160	-23,711617	- 4,585735	58
243 6011,0	+61,146149	+10,219143	+ 8,163966	57	243 6036,0	+60,929024	-17,934751	- 2,336592	58
243 6011,5	+59,187384	+16,242958	+10,218555	57	243 6036,5	+62,368842	-11,961216	- 0,064001	58
243 6012,0	+56,512049	+22,073519	+12,150916	57	243 6037,0	+63,101183	- 5,857732	+ 2,206585	58
243 6012,5	+53,141046	+27,636838	+13,935665	57	243 6037,5	+63,114123	+ 0,307368	+ 4,449579	58
243 6013,0	+49,103847	+32,859227	+15,548138	57	243 6038,0	+62,402333	+ 6,464461	+ 6,639392	58
243 6013,5	+44,438867	+37,668070	+16,964699	57	243 6038,5	+60,967223	+12,542953	+ 8,750556	58
243 6014,0	+39,193896	+41,992829	+18,163148	57	243 6039,0	+58,817213	+18,471626	+10,757864	58
243 6014,5	+33,426348	+45,766179	+19,123140	57	243 6039,5	+55,967964	+24,179017	+12,636527	58
243 6015,0	+27,203366	+48,925396	+19,826695	57	243 6040,0	+52,442660	+29,593840	+14,362344	58
243 6015,5	+20,601606	+51,413778	+20,258712	57	243 6040,5	+48,272390	+34,645530	+15,911916	58
243 6016,0	+13,706813	+53,182361	+20,407540	57	243 6041,0	+43,496429	+39,264829	+17,262879	58
243 6016,5	+ 6,612904	+54,191506	+20,265515	57	243 6041,5	+38,162713	+43,384644	+18,394261	58
243 6017,0	- 0,579276	+54,412536	+19,829443	57	243 6042,0	+32,328012	+46,940917	+19,286778	58
243 6017,5	- 7,763678	+53,829172	+19,101015	57	243 6042,5	+26,058210	+49,873824	+19,923312	58
243 6018,0	-14,831111	+52,438731	+18,087092	57	243 6043,0	+19,428262	+52,129013	+20,289338	58
243 6018,5	-21,671654	+50,252896	+16,799804	57	243 6043,5	+12,521999	+53,659143	+20,373479	58
243 6019,0	-28,177240	+47,298041	+15,256491	57	243 6044,0	+ 5,431577	+54,425426	+20,168014	58
243 6019,5	-34,244337	+43,615033	+13,479438	57	243 6044,5	- 1,743439	+54,399388	+19,669464	58
243 6020,0	-39,776531	+39,258509	+11,495427	57	243 6045,0	- 8,897473	+53,564413	+18,879044	58
243 6020,5	-44,686887	+34,295640	+ 9,335110	57	243 6045,5	-15,920787	+51,917342	+17,803123	58
243 6021,0	-48,899898	+28,804441	+ 7,032269	57	243 6046,0	-22,701765	+49,469568	+16,453460	58
243 6021,5	-52,353144	+22,871861	+ 4,622984	57	243 6046,5	-29,129632	+46,247879	+14,847332	58
243 6022,0	-54,998265	+16,591572	+ 2,144784	57	243 6047,0	-35,097369	+42,294622	+13,007387	58
243 6022,5	-56,801554	+10,061732	- 0,364234	57	243 6047,5	-40,504804	+37,667341	+10,961301	58
243 6023,0	-57,744170	+ 3,382812	- 2,866190	57	243 6048,0	-45,261449	+32,437579	+ 8,741155	58
243 6023,5	-57,821713	- 3,344533	- 5,324178	57	243 6048,5	-49,289186	+26,689233	+ 6,382659	58
243 6024,0	-57,043743	-10,021339	- 7,702898	57	243 6049,0	-52,524335	+20,516254	+ 3,924164	58
243 6024,5	-55,432799	-16,552034	- 9,969221	57	243 6049,5	-54,919146	+14,020025	+1,405622	58
Epoch 1958.0					243 6050,0	-56,442556	+ 7,306536	- 1,132490	58
243 6016,0	+13,692944	+53,185424	+20,408871	58	243 6050,5	-57,080343	+ 0,483572	- 3,650190	58
					243 6051,0	-56,834604	- 6,341951	- 6,108939	58

J.D.	x	y	z	J.D.	x	y	z		
243 6051,5	-55,722731	-13,066351	-8,472409	58	243 6086,5	+27,543430	-53,805479	-17,522420	58
243 6052,0	-53,775998	-19,591167	-10,707114	58	243 6087,0	+33,415895	-51,071609	-16,168940	58
243 6052,5	-51,037975	-25,824768	-12,782883	58	243 6087,5	+38,910937	-47,748456	-14,629218	58
243 6053,0	-47,562792	-31,683528	-14,673155	58	243 6088,0	+43,969255	-43,879124	-12,922522	58
243 6053,5	-43,413347	-37,092643	-16,355169	58	243 6088,5	+48,536697	-39,511526	-11,069504	58
243 6054,0	-38,659715	-41,986692	-17,810040	58	243 6089,0	+52,564503	-34,697933	-9,092007	58
243 6054,5	-33,377453	-46,309817	-19,022715	58	243 6089,5	+56,009595	-29,494558	-7,012907	58
243 6055,0	-27,646260	-50,015841	-19,981928	58	243 6090,0	+58,834878	-23,961142	-4,855949	58
243 6055,5	-21,548613	-53,068149	-20,680060	58	243 6090,5	+61,009441	-18,160464	-2,645539	58
243 6056,0	-15,168623	-55,439447	-21,112964	58	243 6091,0	+62,508807	-12,157891	-0,406600	58
243 6056,5	-8,591020	-57,111557	-21,279832	58	243 6091,5	+63,315152	-6,020891	+1,835654	58
243 6057,0	-1,900199	-58,074990	-21,182968	58	243 6092,0	+63,417454	+0,181480	+4,055879	58
243 6057,5	+4,820575	-58,328695	-20,827634	58	243 6092,5	+62,811640	+6,379095	+6,228823	58
243 6058,0	+11,489937	-57,879526	-20,221825	58	243 6093,0	+61,500693	+12,501281	+8,329491	58
243 6058,5	+18,029070	-56,741942	-19,376089	58	243 6093,5	+59,494756	+18,477373	+10,333380	58
243 6059,0	+24,362346	-54,937555	-18,303332	58	243 6094,0	+56,811079	+24,237223	+12,216616	58
243 6059,5	+30,417866	-52,494634	-17,018621	58	243 6094,5	+53,474248	+29,711815	+13,956226	58
243 6060,0	+36,128002	-49,447697	-15,538959	58	243 6095,0	+49,515979	+34,833764	+15,530270	58
243 6060,5	+41,429801	-45,836953	-13,883091	58	243 6095,5	+44,975307	+39,537993	+16,918115	58
243 6061,0	+46,265424	-41,707859	-12,071304	58	243 6096,0	+39,898373	+43,762264	+18,100597	58
243 6061,5	+50,582521	-37,110615	-10,125206	58	243 6096,5	+34,338518	+47,447928	+19,060298	58
243 6062,0	+54,334465	-32,099585	-8,067521	58	243 6097,0	+28,356077	+50,540533	+19,781750	58
243 6062,5	+57,480721	-26,732871	-5,921900	58	243 6097,5	+22,018291	+52,990627	+20,251714	58
243 6063,0	+59,986905	-21,071702	-3,712703	58	243 6098,0	+15,399100	+54,754616	+20,459466	58
243 6063,5	+61,825091	-15,180006	-1,464816	58	243 6098,5	+8,578824	+55,795624	+20,397078	58
243 6064,0	+62,973851	-9,123881	+0,796537	58	243 6099,0	+1,643740	+56,084495	+20,059749	58
243 6064,5	+63,418376	-2,971141	+3,045972	58	243 6099,5	-5,314532	+55,600903	+19,446170	58
243 6065,0	+63,150599	+3,209146	+5,258107	58	243 6100,0	-12,199875	+54,334417	+18,558813	58
243 6065,5	+62,169203	+9,347092	+7,407725	58	243 6100,5	-18,912776	+52,285615	+17,404298	58
243 6066,0	+60,479771	+15,372400	+9,469928	58	243 6101,0	-25,351747	+49,467167	+15,993652	58
243 6066,5	+58,094867	+21,214817	+11,420303	58	243 6101,5	-31,415102	+45,904771	+14,342542	58
243 6067,0	+55,034149	+26,804552	+13,235078	58	243 6102,0	-37,003045	+41,637806	+12,471365	58
243 6067,5	+51,324509	+32,072759	+14,891306	58	243 6102,5	-42,020105	+36,719680	+10,405231	58
243 6068,0	+47,000216	+36,952027	+16,367047	58	243 6103,0	-46,377759	+31,217714	+8,173730	58
243 6068,5	+42,103105	+41,376975	+17,641591	58	243 6103,5	-49,997252	+25,212457	+5,810527	58
243 6069,0	+36,682693	+45,284850	+18,695689	58	243 6104,0	-52,812147	+18,796271	+3,352691	58
243 6069,5	+30,796401	+48,616369	+19,511856	58	243 6104,5	-54,770857	+12,071475	+0,839867	58
243 6070,0	+24,509618	+51,316570	+20,074689	58	243 6105,0	-55,838485	+5,147712	-1,686765	58
243 6070,5	+17,895663	+53,335824	+20,371207	58	243 6105,5	-55,998130	-1,860966	-4,185627	58
243 6071,0	+11,035692	+54,631082	+20,391322	58	243 6106,0	-55,251317	-8,839362	-6,615909	58
243 6071,5	+4,018290	+55,167130	+20,128229	58	243 6106,5	-53,617735	-15,674362	-8,938716	58
243 6072,0	-3,061150	+54,918061	+19,578911	58	243 6107,0	-51,134067	-22,257953	-11,118051	58
243 6072,5	-10,101438	+53,868743	+18,744593	58	243 6107,5	-47,852268	-28,489887	-13,121658	58
243 6073,0	-16,996975	+52,016260	+17,631165	58	243 6108,0	-43,837286	-34,279733	-14,921599	58
243 6073,5	-23,639599	+49,371272	+16,249547	58	243 6108,5	-39,164647	-39,548433	-16,494649	58
243 6074,0	-29,920885	+45,959074	+14,615927	58	243 6109,0	-33,917801	-44,229140	-17,822436	58
243 6074,5	-35,734813	+41,820209	+12,751796	58	243 6109,5	-28,185677	-48,267591	-18,891401	58
243 6075,0	-40,980742	+37,010605	+10,683824	58	243 6110,0	-22,060412	-51,621994	-19,692627	58
243 6075,5	-45,566507	+31,601000	+8,443418	58	243 6110,5	-15,635331	-54,262498	-20,221507	58
243 6076,0	-49,411367	+25,675665	+6,066100	58	243 6111,0	-9,003347	-56,170583	-20,477440	58
243 6076,5	-52,448780	+19,330462	+3,590615	58	243 6111,5	-2,255599	-57,338098	-20,463393	58
243 6077,0	-54,628394	+12,670224	+1,057859	58	243 6112,0	+4,519551	-57,766393	-20,185523	58
243 6077,5	-55,917590	+5,805804	-1,490269	58	243 6112,5	+11,237277	-57,465474	-19,652828	58
243 6078,0	-56,302008	-1,149182	-4,012089	58	243 6113,0	+17,816850	-56,453018	-18,876772	58
243 6078,5	-55,785451	-8,081541	-6,467251	58	243 6113,5	+24,182031	-54,753734	-17,871011	58
243 6079,0	-54,388783	-14,881487	-8,817752	58	243 6114,0	+30,261322	-52,398553	-16,651117	58
243 6079,5	-52,148556	-21,445223	-11,028770	58	243 6114,5	+35,988213	-49,424114	-15,234343	58
243 6080,0	-49,114884	-27,676991	-13,069248	58	243 6115,0	+41,301274	-45,872123	-13,639422	58
243 6080,5	-45,349402	-33,490634	-14,912331	58	243 6115,5	+46,144353	-41,788989	-11,886410	58
243 6081,0	-40,922845	-38,810537	-16,535553	58	243 6116,0	+50,466705	-37,225382	-9,996515	58
243 6081,5	-35,912967	-43,572192	-17,920877	58	243 6116,5	+54,223066	-32,235807	-7,991951	58
243 6082,0	-30,402407	-47,722243	-19,054594	58	243 6117,0	+57,373982	-26,878363	-5,895831	58
243 6082,5	-24,477000	-51,218409	-19,927179	58	243 6117,5	+59,885882	-21,214292	-3,731989	58
243 6083,0	-18,224135	-54,028971	-20,532987	58	243 6118,0	+61,731320	-15,307653	-1,524865	58
243 6083,5	-11,731506	-56,132315	-20,870019	58	243 6118,5	+62,889311	-9,224948	+0,700656	58
243 6084,0	-5,086021	-57,516276	-20,939609	58	243 6119,0	+63,345433	-3,034667	+2,919408	58
243 6084,5	+1,627045	-58,177583	-20,746169	58	243 6119,5	+63,092166	+3,193159	+5,106140	58
243 6085,0	+8,324773	-58,121125	-20,296874	58	243 6120,0	+62,129041	+9,387473	+7,235682	58
243 6085,5	+14,927176	-57,359460	-19,601456	58	243 6120,5	+60,462891	+15,476739	+9,283178	58
243 6086,0	+21,357657	-55,912187	-18,671932	58	243 6121,0	+58,107979	+21,389570	+11,224307	58

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z		J.D.	x	y	z	
243 6121,5	+55,086063	+27,055353	+13,035496	58	243 6156,5	-37,113208	+43,527400	+12,993017	58
243 6122,0	+51,426491	+32,404946	+14,694197	58	243 6157,0	-42,165451	+38,934376	+11,052810	58
243 6122,5	+47,166141	+37,371392	+16,179106	58	243 6157,5	-46,601454	+33,774217	+8,951759	58
243 6123,0	+42,349368	+41,890675	+17,470447	58	243 6158,0	-50,350420	+28,116054	+6,718703	58
243 6123,5	+37,027747	+45,902419	+18,550190	58	243 6158,5	-53,350875	+22,038225	+4,385133	58
243 6124,0	+31,259935	+49,350749	+19,402354	58	243 6159,0	-55,552143	+15,627226	+1,984730	58
243 6124,5	+25,111246	+52,184986	+20,013219	58	243 6159,5	-56,915656	+8,976424	-0,447167	58
243 6125,0	+18,653285	+54,360475	+20,371605	58	243 6160,0	-57,416200	+2,184501	-2,874195	58
243 6125,5	+11,963422	+55,839293	+20,469080	58	243 6160,5	-57,042736	-4,646337	-5,259651	58
243 6126,0	+5,124226	+56,591107	+20,300218	58	243 6161,0	-55,799070	-11,412391	-7,567239	58
243 6126,5	-1,777253	+56,593859	+19,862814	58	243 6161,5	-53,704053	-18,010629	-9,761846	58
243 6127,0	-8,650289	+55,834570	+19,158099	58	243 6162,0	-50,791354	-24,340908	-11,810322	58
243 6127,5	-15,401425	+54,310035	+18,190927	58	243 6162,5	-47,108771	-30,308220	-13,682210	58
243 6128,0	-21,935599	+52,027547	+16,969960	58	243 6163,0	-42,717122	-35,824752	-15,350416	58
243 6128,5	-28,157402	+49,005512	+15,507804	58	243 6163,5	-37,688705	-40,811749	-16,791754	58
243 6129,0	-33,972574	+45,273928	+13,821080	58	243 6164,0	-32,105361	-45,200992	-17,987362	58
243 6129,5	-39,289646	+40,874755	+11,930450	58	243 6164,5	-26,056438	-48,935962	-18,922964	58
243 6130,0	-44,021808	+35,862030	+9,860542	58	243 6165,0	-19,636496	-51,972487	-19,588968	58
243 6130,5	-48,088954	+30,301724	+7,639760	58	243 6165,5	-12,943081	-54,278927	-19,980378	58
243 6131,0	-51,419722	+24,271160	+5,299960	58	243 6166,0	-6,074650	-55,836105	-20,096649	58
243 6131,5	-53,953674	+17,858103	+2,875979	58	243 6166,5	+0,871371	-56,636691	-19,941332	58
243 6132,0	-55,643281	+11,159326	+0,405000	58	243 6167,0	+7,800209	-56,684487	-19,521735	58
243 6132,5	-56,455682	+4,278743	-2,074201	58	243 6167,5	+14,621076	-55,993427	-18,848481	58
243 6133,0	-56,374115	-2,674893	-4,522178	58	243 6168,0	+21,248241	-54,586534	-17,935073	58
243 6133,5	-55,398726	-9,590628	-6,899795	58	243 6168,5	+27,601721	-52,494758	-16,797440	58
243 6134,0	-53,546795	-16,358137	-9,169230	58	243 6169,0	+33,607834	-49,755979	-15,453551	58
243 6134,5	-50,852362	-22,870601	-11,294967	58	243 6169,5	+39,199455	-46,413973	-13,923038	58
243 6135,0	-47,365029	-29,027397	-13,244675	58	243 6170,0	+44,316123	-42,517491	-12,226857	58
243 6135,5	-43,148321	-34,736515	-14,989959	58	243 6170,5	+48,904109	-38,119551	-10,387045	58
243 6136,0	-38,277569	-39,916517	-16,506897	58	243 6171,0	+52,916285	-33,276684	-8,426453	58
243 6136,5	-32,837356	-44,497871	-17,776362	58	243 6171,5	+56,312081	-28,048447	-6,368592	58
243 6137,0	-26,919101	-48,423883	-18,784197	58	243 6172,0	+59,057382	-22,496940	-4,237453	58
243 6137,5	-20,618438	-51,650905	-19,521111	58	243 6172,5	+61,124417	-16,686415	-2,057394	58
243 6138,0	-14,032961	-54,148215	-19,982499	58	243 6173,0	+62,491773	-10,682992	-0,146975	58
243 6138,5	-7,260137	-55,897422	-20,168095	58	243 6173,5	+63,144420	-4,554362	+2,350881	58
243 6139,0	-0,395615	-56,891629	-20,081577	58	243 6174,0	+63,073778	+1,630487	+4,529502	58
243 6139,5	+6,468150	-57,134462	-19,730129	58	243 6174,5	+62,277849	+7,801547	+6,658064	58
243 6140,0	+13,242935	-56,638960	-19,123987	58	243 6175,0	+60,761435	+13,888087	+8,711965	58
243 6140,5	+19,845454	-55,426482	-18,276006	58	243 6175,5	+58,536423	+19,819059	+10,666925	58
243 6141,0	+26,197884	-53,525762	-17,201284	58	243 6176,0	+55,621988	+25,523520	+12,499149	58
243 6141,5	+32,228119	-50,971896	-15,916803	58	243 6176,5	+52,044937	+30,931194	+14,185550	58
243 6142,0	+37,869958	-47,805588	-14,441145	58	243 6177,0	+47,839943	+35,973133	+15,704000	58
243 6142,5	+43,063144	-44,072422	-12,794224	58	243 6177,5	+43,049787	+40,582513	+17,033609	58
243 6143,0	+47,753384	-39,822239	-10,997077	58	243 6178,0	+37,725441	+44,695528	+18,155051	58
243 6143,5	+51,892349	-35,108689	-9,071706	58	243 6178,5	+31,926054	+48,252401	+19,050930	58
243 6144,0	+55,437642	-29,988762	-7,040901	58	243 6179,0	+25,718759	+51,198497	+19,706142	58
243 6144,5	+58,352889	-24,522485	-4,928143	58	243 6179,5	+19,178300	+53,485469	+20,108265	58
243 6145,0	+60,607697	-18,772541	-2,757463	58	243 6180,0	+12,386386	+55,072475	+20,247955	58
243 6145,5	+62,177904	-12,804035	-0,553350	58	243 6180,5	+5,430822	+52,927288	+20,219267	58
243 6146,0	+63,045610	-6,684145	+1,659379	58	243 6181,0	-1,595610	+56,027350	+19,719973	58
243 6146,5	+63,199475	-0,481824	+3,855701	58	243 6181,5	-8,596506	+55,360751	+19,051807	58
243 6147,0	+62,634913	+5,732574	+6,010535	58	243 6182,0	-15,473389	+53,926896	+18,120620	58
243 6147,5	+61,354361	+11,887728	+8,098898	58	243 6182,5	-22,127413	+51,736950	+16,936428	58
243 6148,0	+59,367572	+17,911833	+10,096114	58	243 6183,0	-28,461177	+48,814145	+15,513404	58
243 6148,5	+56,691824	+23,733179	+11,978016	58	243 6183,5	-34,380559	+45,193616	+13,869706	58
243 6149,0	+53,352110	+29,280800	+13,721192	58	243 6184,0	-39,796546	+40,922096	+12,027271	58
243 6149,5	+49,381363	+34,485227	+15,303259	58	243 6184,5	-44,626918	+36,057173	+10,011436	58
243 6150,0	+44,820453	+39,279302	+16,703158	58	243 6185,0	-48,797919	+30,666507	+7,850559	58
243 6150,5	+39,718180	+43,599077	+17,901454	58	243 6185,5	-52,245581	+24,826612	+5,575531	58
243 6151,0	+34,131061	+47,584709	+18,880665	58	243 6186,0	-54,917047	+18,621625	+3,219230	58
243 6151,5	+28,123046	+50,581461	+19,625560	58	243 6186,5	-56,771428	+12,141781	+0,815958	58
243 6152,0	+21,765037	+53,140632	+20,123489	58	243 6187,0	-57,780686	+5,481908	-1,599163	58
243 6152,5	+15,134261	+55,020516	+20,364670	58	243 6187,5	-57,930066	-1,260283	-3,990793	58
243 6153,0	+8,313506	+56,187295	+20,342438	58	243 6188,0	-57,218333	-7,985867	-6,324007	58
243 6153,5	+1,390181	+56,615812	+20,053485	58	243 6188,5	-55,657845	-14,596453	-8,564887	58
243 6154,0	-5,544719	+56,290366	+19,498056	58	243 6189,0	-53,274234	-20,995900	-10,681121	58
243 6154,5	-12,397802	+55,205257	+18,680066	58	243 6189,5	-50,105910	-27,091993	-12,642568	58
243 6155,0	-19,074521	+53,365245	+17,607192	58	243 6190,0	-46,203303	-32,798080	-14,421764	58
243 6155,5	-25,480580	+50,786000	+16,290938	58	243 6190,5	-41,627794	-38,034521	-15,994388	58
243 6156,0	-31,523302	+47,494137	+14,746555	58	243 6191,0	-36,450511	-42,730052	-17,339656	58

J.D.	x	y	z	J.D.	x	y	z		
243 6191,5	-30,750815	-46,822895	-18,440635	58	243 6226,5	+58,095454	-24,306886	-5,387547	58
243 6192,0	-24,614735	-50,261678	-19,284447	58	243 6227,0	+60,479963	-18,543595	-3,229990	58
243 6192,5	-18,133203	-53,006042	-19,862392	58	243 6227,5	+62,175844	-12,575881	-1,039059	58
243 6193,0	-11,400270	-55,026956	-20,169959	58	243 6228,0	+63,166540	-6,472229	+1,160342	58
243 6193,5	-4,511376	-56,306856	-20,206738	58	243 6228,5	+63,442433	-0,301844	+3,343464	58
243 6194,0	+2,438385	-56,839303	-19,976228	58	243 6229,0	+63,000585	+5,865806	+5,485840	58
243 6194,5	+9,355795	-56,628642	-19,485597	58	243 6229,5	+61,844696	+11,961345	+7,563417	58
243 6195,0	+16,150895	-55,689189	-18,745324	58	243 6230,0	+59,985032	+17,915819	+9,552654	58
243 6195,5	+22,738160	-54,044536	-17,768884	58	243 6230,5	+57,438451	+23,661020	+11,430649	58
243 6196,0	+29,037421	-51,726501	-16,572315	58	243 6231,0	+54,228343	+29,129797	+13,175229	58
243 6196,5	+34,974621	-48,774241	-15,173866	58	243 6231,5	+50,384744	+34,256386	+14,765077	58
243 6197,0	+40,482257	-45,233149	-13,593578	58	243 6232,0	+45,944529	+38,976849	+16,179895	58
243 6197,5	+45,499749	-41,153990	-11,852962	58	243 6232,5	+40,951502	+43,229506	+17,400550	58
243 6198,0	+49,973585	-36,591974	-9,974657	58	243 6233,0	+35,456568	+46,955484	+18,409285	58
243 6198,5	+53,857337	-31,605949	-7,982147	58	243 6233,5	+29,517954	+50,099481	+19,189982	58
243 6199,0	+57,111612	-26,257692	-5,899528	58	243 6234,0	+23,201262	+52,610521	+19,728440	58
243 6199,5	+59,703968	-20,611325	-3,751288	58	243 6234,5	+16,579483	+54,442962	+20,012712	58
243 6200,0	+61,608757	-14,732772	-1,562144	58	243 6235,0	+9,732857	+55,557600	+20,033502	58
243 6200,5	+62,806978	-8,689350	+0,643099	58	243 6235,5	+2,748509	+55,922988	+19,784582	58
243 6201,0	+63,286274	-2,549424	+2,839673	58	243 6236,0	-4,280221	+55,516671	+19,263204	58
243 6201,5	+63,040784	+3,617929	+5,002949	58	243 6236,5	-11,254756	+54,326687	+18,470561	58
243 6202,0	+62,071150	+9,743171	+7,108516	58	243 6237,0	-18,072668	+52,352809	+17,412142	58
243 6202,5	+60,384651	+15,756593	+9,132307	58	243 6237,5	-24,629474	+49,607818	+16,098095	58
243 6203,0	+57,995293	+21,588603	+11,050682	58	243 6238,0	-30,820792	+46,118287	+14,543367	58
243 6203,5	+54,923959	+27,170048	+12,840570	58	243 6238,5	-36,544852	+41,925155	+12,767782	58
243 6204,0	+51,198730	+32,432657	+14,479628	58	243 6239,0	-41,705233	+37,083722	+10,795877	58
243 6204,5	+46,855047	+37,309512	+15,946412	58	243 6239,5	-46,213608	+31,662986	+8,656543	58
243 6205,0	+41,936060	+41,735690	+17,220633	58	243 6240,0	-49,992404	+25,744464	+6,382442	58
243 6205,5	+36,492800	+45,649003	+18,283423	58	243 6240,5	-52,977229	+19,420426	+4,009286	58
243 6206,0	+30,584350	+48,990907	+19,117653	58	243 6241,0	-55,118675	+12,791536	+1,574894	58
243 6206,5	+24,277868	+51,707537	+19,708316	58	243 6241,5	-56,383681	+5,964265	-0,881763	58
243 6207,0	+17,648452	+53,750923	+20,042925	58	243 6242,0	-56,756057	-0,951952	-3,321603	58
243 6207,5	+10,778724	+55,080253	+20,111952	58	243 6242,5	-56,236576	-7,847515	-5,706407	58
243 6208,0	+3,758177	+55,663210	+19,909244	58	243 6243,0	-54,842181	-14,615318	-7,999696	58
243 6208,5	-3,317846	+55,477327	+19,432446	58	243 6243,5	-52,604885	-21,153078	-10,167503	58
243 6209,0	-10,349468	+54,511246	+18,683372	58	243 6244,0	-49,570252	-27,365326	-12,178968	58
243 6209,5	-17,233977	+52,765745	+17,668260	58	243 6244,5	-45,795546	-33,164924	-14,006779	58
243 6210,0	-23,867782	+50,254580	+16,397963	58	243 6245,0	-41,347946	-38,474236	-15,627482	58
243 6210,5	-30,148663	+47,004960	+14,887975	58	243 6245,5	-36,302583	-43,225856	-17,021610	58
243 6211,0	-35,978074	+43,057506	+13,158299	58	243 6246,0	-30,740705	-47,362993	-18,173748	58
243 6211,5	-41,263519	+38,465843	+11,233150	58	243 6246,5	-24,748038	-50,839676	-19,072486	58
243 6212,0	-45,920849	+33,295766	+9,140540	58	243 6247,0	-18,413190	-53,620660	-19,710316	58
243 6212,5	-49,876244	+27,623843	+6,911665	58	243 6247,5	-11,826264	-55,681215	-20,083472	58
243 6213,0	-53,067942	+21,535804	+4,580243	58	243 6248,0	-5,077585	-57,006740	-20,191733	58
243 6213,5	-55,447505	+15,124573	+2,181753	58	243 6248,5	+1,743385	-57,592405	-20,038227	58
243 6214,0	-56,980716	+8,488216	-0,247347	58	243 6249,0	+8,549050	-57,442612	-19,629202	58
243 6214,5	-57,648011	+1,727781	-2,670407	58	243 6249,5	+15,254526	-56,570458	-18,973778	58
243 6215,0	-57,444429	-5,054825	-5,051313	58	243 6250,0	+21,778459	-54,997265	-18,083750	58
243 6215,5	-56,379303	-11,758826	-7,355176	58	243 6250,5	+28,043668	-52,751865	-16,973294	58
243 6216,0	-54,475561	-18,286398	-9,548938	58	243 6251,0	+33,977820	-49,870135	-15,658779	58
243 6216,5	-51,768836	-24,544338	-11,601890	58	243 6251,5	+39,513916	-46,394250	-14,158470	58
243 6217,0	-48,306347	-30,445451	-13,486111	58	243 6252,0	+44,590787	-42,372098	-12,492300	58
243 6217,5	-44,145646	-35,909757	-15,176799	58	243 6252,5	+49,153476	-37,856591	-10,681607	58
243 6218,0	-39,353350	-40,865505	-16,652576	58	243 6253,0	+53,153533	-32,904994	-8,748899	58
243 6218,5	-34,003696	-45,249926	-17,895650	58	243 6253,5	+56,549313	-27,578271	-6,717578	58
243 6219,0	-28,177179	-49,009859	-18,891960	58	243 6254,0	+59,306037	-21,940370	-4,611721	58
243 6219,5	-21,959098	-52,102157	-19,631236	58	243 6254,5	+61,396035	-16,057650	-2,455855	58
243 6220,0	-15,438157	-54,493943	-20,107011	58	243 6255,0	+62,798675	-9,998182	-0,274717	58
243 6220,5	-8,705064	-56,162665	-20,316547	58	243 6255,5	+63,500381	-3,831194	+1,906938	58
243 6221,0	-1,851184	-57,096052	-20,260750	58	243 6256,0	+63,494567	+2,373497	+4,064527	58
243 6221,5	+5,032731	-57,291888	-19,944019	58	243 6256,5	+62,781625	+8,546011	+6,173825	58
243 6222,0	+11,857790	-56,757574	-19,374012	58	243 6257,0	+61,368722	+14,616879	+8,211123	58
243 6222,5	+18,538034	-55,509708	-18,561445	58	243 6257,5	+59,269675	+20,517496	+10,153362	58
243 6223,0	+24,991477	-53,573476	-17,519812	58	243 6258,0	+56,504942	+26,180530	+11,978284	58
243 6223,5	+31,140945	-50,981868	-16,265071	58	243 6258,5	+53,101457	+31,540331	+13,664564	58
243 6224,0	+36,914832	-47,774992	-14,815346	58	243 6259,0	+49,092539	+36,533298	+15,191923	58
243 6224,5	+42,247674	-43,999204	-13,190602	58	243 6259,5	+44,517918	+41,098304	+16,541293	58
243 6225,0	+47,080599	-39,706301	-11,412321	58	243 6260,0	+39,423658	+45,177115	+17,694925	58
243 6225,5	+51,361600	-34,952639	-9,503194	58	243 6260,5	+33,862151	+48,714820	+18,636575	58
243 6226,0	+55,045807	-29,798430	-7,486843	58	243 6261,0	+27,892185	+51,660446	+19,351685	58

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z	J.D.	x	y	z		
243 6261,5	+21,578903	+53,967555	+19,827608	58	243 6296,5	-55,882795	+4,538406	-1,262927	58
243 6262,0	+14,993738	+55,594967	+20,053834	58	243 6297,0	-55,809907	-2,512185	-3,678825	58
243 6262,5	+8,214316	+56,507632	+20,022300	58	243 6297,5	-54,823507	-9,523623	-6,034819	58
243 6263,0	+1,324163	+56,677578	+19,727703	58	243 6298,0	-52,939234	-16,379722	-8,291839	58
243 6263,5	-5,587692	+56,085043	+19,167850	58	243 6298,5	-50,191142	-22,967744	-10,412935	58
243 6264,0	-12,427430	+54,719585	+18,344026	58	243 6299,0	-46,630486	-29,181604	-12,364317	58
243 6264,5	-19,097379	+52,581316	+17,261360	58	243 6299,5	-42,323779	-34,924615	-14,116202	58
243 6265,0	-25,497375	+49,682151	+15,929190	58	243 6300,0	-37,350349	-40,111732	-15,643454	58
243 6265,5	-31,526454	+46,046798	+14,361313	58	243 6300,5	-31,799553	-44,671144	-16,925992	58
243 6266,0	-37,084980	+41,713662	+12,576185	58	243 6301,0	-25,767811	-48,545072	-17,948913	58
243 6266,5	-42,077106	+36,735278	+10,596951	58	243 6301,5	-19,355817	-51,690075	-18,702450	58
243 6267,0	-46,413505	+31,178289	+8,451288	58	243 6302,0	-12,665950	-54,076677	-19,181714	58
243 6267,5	-50,014193	+25,122789	+6,171037	58	243 6302,5	-5,800046	-55,688708	-19,386353	58
243 6268,0	-52,811406	+18,661079	+3,791627	58	243 6303,0	+1,142437	-56,522232	-19,320099	58
243 6268,5	-54,752033	+11,895645	+1,351239	58	243 6303,5	+8,065853	-56,584496	-18,990307	58
243 6269,0	-55,799705	+4,936626	-1,110163	58	243 6304,0	+14,879439	-55,892573	-18,407473	58
243 6269,5	-55,936101	-2,101236	-3,551966	58	243 6304,5	+21,498062	-54,472274	-17,584785	58
243 6270,0	-55,161573	-9,101854	-5,934053	58	243 6305,0	+27,842742	-52,357001	-16,537726	58
243 6270,5	-53,494748	-15,951081	-8,217928	58	243 6305,5	+33,840895	-49,586648	-15,283680	58
243 6271,0	-50,971570	-22,539807	-10,367735	58	243 6306,0	+39,426576	-46,206841	-13,841655	58
243 6271,5	-47,643509	-28,766601	-12,351081	58	243 6306,5	+44,540461	-42,267968	-12,231952	58
243 6272,0	-43,575385	-34,539868	-14,139660	58	243 6307,0	+49,129902	-37,824596	-10,475961	58
243 6272,5	-38,842911	-39,779365	-15,709663	58	243 6307,5	+53,148951	-32,934875	-8,595969	58
243 6273,0	-33,530149	-44,417149	-17,041960	58	243 6308,0	+56,558240	-27,659918	-6,614926	58
243 6273,5	-27,727049	-48,397968	-18,122125	58	243 6308,5	+59,325064	-22,063402	-4,556334	58
243 6274,0	-21,527197	-51,679283	-18,940304	58	243 6309,0	+61,423380	-16,211108	-2,444057	58
243 6274,5	-15,025788	-54,230753	-19,490951	58	243 6309,5	+62,833773	-10,170448	-0,302195	58
243 6275,0	-8,317962	-56,033740	-19,772556	58	243 6310,0	+63,543561	-4,010088	+1,845077	58
243 6275,5	-1,497407	-57,080527	-19,787305	58	243 6310,5	+63,546800	+2,200510	+3,973662	58
243 6276,0	+5,344800	-57,373385	-19,540702	58	243 6311,0	+62,844311	+8,391542	+6,059685	58
243 6276,5	+12,121067	-56,923833	-19,041264	58	243 6311,5	+61,443798	+14,493318	+8,079659	58
243 6277,0	+18,747966	-55,751666	-18,300142	58	243 6312,0	+59,359839	+20,436776	+10,010671	58
243 6277,5	+25,146809	-53,884316	-17,330878	58	243 6312,5	+56,613869	+26,154012	+11,830543	58
243 6278,0	+31,244026	-51,355953	-16,149070	58	243 6313,0	+53,234162	+31,578841	+13,518040	58
243 6278,5	+36,971538	-48,206891	-14,772158	58	243 6313,5	+49,255744	+36,647368	+15,053057	58
243 6279,0	+42,267018	-44,482925	-13,219158	58	243 6314,0	+44,720275	+41,298608	+16,416815	58
243 6279,5	+47,074152	-40,234742	-11,510468	58	243 6314,5	+39,675799	+45,475046	+17,592058	58
243 6280,0	+51,342832	-35,517327	-9,667641	58	243 6315,0	+34,176559	+49,123281	+18,563251	58
243 6280,5	+55,029293	-30,389398	-7,713181	58	243 6315,5	+28,282649	+52,194584	+19,316757	58
243 6281,0	+58,096342	-24,912907	-5,670364	58	243 6316,0	+22,059710	+54,645569	+19,841050	58
243 6281,5	+60,513472	-19,152489	-3,563028	58	243 6316,5	+15,578474	+56,438750	+20,126878	58
243 6282,0	+62,256918	-13,174896	-1,415401	58	243 6317,0	+8,914300	+57,543094	+20,167446	58
243 6282,5	+63,309820	-7,048509	+0,748104	58	243 6317,5	+2,146657	+57,934703	+19,958594	58
243 6283,0	+63,662219	-0,842771	+2,903061	58	243 6318,0	-4,641487	+57,597304	+19,498958	58
243 6283,5	+63,311161	+5,372337	+5,025228	58	243 6318,5	-11,364334	+56,522845	+18,790129	58
243 6284,0	+62,260587	+11,526850	+7,090727	58	243 6319,0	-17,934042	+54,712130	+17,836832	58
243 6284,5	+60,521407	+17,551335	+9,076233	58	243 6319,5	-24,261587	+52,175273	+16,647041	58
243 6285,0	+58,111306	+23,377438	+10,959140	58	243 6320,0	-30,257801	+48,932303	+15,232125	58
243 6285,5	+55,054717	+28,938386	+12,717738	58	243 6320,5	-35,834544	+45,013610	+13,606950	58
243 6286,0	+51,382670	+34,169499	+14,331389	58	243 6321,0	-40,906046	+40,460288	+11,789936	58
243 6286,5	+47,132642	+39,008701	+15,780676	58	243 6321,5	-45,390426	+35,324411	+9,803054	58
243 6287,0	+42,348366	+43,396976	+17,047564	58	243 6322,0	-49,211419	+29,669038	+7,671762	58
243 6287,5	+37,079710	+47,278908	+18,115573	58	243 6322,5	-52,300194	+23,567982	+5,424818	58
243 6288,0	+31,382430	+50,603116	+18,969923	58	243 6323,0	-54,597296	+17,105234	+3,093999	58
243 6288,5	+25,318021	+53,322838	+19,597707	58	243 6323,5	-56,054720	+10,374040	+0,713668	58
243 6289,0	+18,953485	+55,396459	+19,988081	58	243 6324,0	-56,637760	+3,475454	-1,679812	58
243 6289,5	+12,361073	+56,788066	+20,132416	58	243 6324,5	-56,326704	-3,483525	-4,048794	58
243 6290,0	+5,618022	+57,468142	+20,024552	58	243 6325,0	-55,118187	-10,392256	-6,355220	58
243 6290,5	-1,193830	+57,414316	+19,660999	58	243 6325,5	-53,026055	-17,139151	-8,561569	58
243 6291,0	-7,988505	+56,612046	+19,041179	58	243 6326,0	-50,081460	-23,614545	-10,631852	58
243 6291,5	-14,676517	+55,055554	+18,167697	58	243 6326,5	-46,332488	-29,713711	-12,532626	58
243 6292,0	-21,165681	+52,748707	+17,046599	58	243 6327,0	-41,842870	-35,339688	-14,233898	58
243 6292,5	-27,362122	+49,705806	+15,687607	58	243 6327,5	-36,690103	-40,405794	-15,709884	58
243 6293,0	-33,171623	+45,952555	+14,104369	58	243 6328,0	-30,963078	-44,837670	-16,939604	58
243 6293,5	-38,501186	+41,526690	+12,314603	58	243 6328,5	-24,759370	-48,574779	-17,907237	58
243 6294,0	-43,260984	+36,478586	+10,340195	58	243 6329,0	-18,182250	-51,571100	-18,602237	58
243 6294,5	-47,366537	+30,871412	+8,207149	58	243 6329,5	-11,337920	-53,795378	-19,019246	58
243 6295,0	-50,741196	+24,780998	+5,945415	58	243 6330,0	-4,332838	-55,230713	-19,157846	58
243 6295,5	-53,318583	+18,295039	+3,588476	58	243 6330,5	+2,728563	-55,873687	-19,022126	58
243 6296,0	-55,045236	+11,511854	+1,172807	58	243 6331,0	+9,745785	-55,733279	-18,620220	58

J.D.	x	y	z	J.D.	x	y	z		
243 6331,5	+16,623720	-54,829464	-17,963751	58	243 6366,5	+59,529695	+19,471217	+9,546884	58
243 6332,0	+23,273711	-53,191804	-17,067304	58	243 6367,0	+56,895269	+25,200410	+11,392484	58
243 6332,5	+29,614265	-50,858104	-15,947919	58	243 6367,5	+53,606365	+30,646066	+13,109787	58
243 6333,0	+35,571428	-47,873037	-14,624604	58	243 6368,0	+49,697028	+35,744061	+14,678416	58
243 6333,5	+41,078969	-44,286988	-13,117932	58	243 6368,5	+45,207961	+40,432697	+16,079155	58
243 6334,0	+46,078380	-40,155032	-11,449697	58	243 6369,0	+40,186532	+44,653275	+17,294108	58
243 6334,5	+50,518758	-35,536011	-9,642593	58	243 6369,5	+34,686805	+48,350769	+18,306953	58
243 6335,0	+54,356644	-30,491789	-7,719977	58	243 6370,0	+28,769359	+51,474518	+19,103158	58
243 6335,5	+57,555825	-25,086642	-5,705669	58	243 6370,5	+22,501126	+53,979071	+19,670277	58
243 6336,0	+60,087103	-19,386694	-3,623765	58	243 6371,0	+15,955002	+55,824988	+19,998188	58
243 6336,5	+61,928249	-13,459531	-1,498521	58	243 6371,5	+9,209355	+56,979701	+20,079384	58
243 6337,0	+63,063764	-7,373764	+0,645800	58	243 6372,0	+2,347345	+57,418396	+19,909226	58
243 6337,5	+63,484843	-1,198682	+2,785033	58	243 6372,5	-4,543914	+57,124846	+19,486204	58
243 6338,0	+63,189356	+4,996073	+4,895234	58	243 6373,0	-11,374407	+56,092124	+18,812121	58
243 6338,5	+62,181827	+11,140900	+6,952789	58	243 6373,5	-18,052408	+54,323216	+17,892262	58
243 6339,0	+60,473443	+17,166573	+8,934561	58	243 6374,0	-24,485797	+51,831491	+16,735472	58
243 6339,5	+58,082158	+23,004695	+10,818016	58	243 6374,5	-30,583549	+48,641046	+15,354232	58
243 6340,0	+55,032690	+28,588134	+12,581399	58	243 6375,0	-36,257230	+44,786698	+13,764575	58
243 6340,5	+51,356548	+33,851546	+14,203893	58	243 6375,5	-41,422607	+40,313900	+11,985973	58
243 6341,0	+47,092080	+38,731956	+15,665828	58	243 6376,0	-46,001149	+35,278314	+10,041147	58
243 6341,5	+42,284357	+43,169378	+16,948886	58	243 6376,5	-49,921616	+29,745265	+7,955783	58
243 6342,0	+36,985097	+47,107495	+18,036337	58	243 6377,0	-53,121435	+23,788900	+5,758191	58
243 6342,5	+31,252393	+50,494344	+18,913251	58	243 6377,5	-55,548051	+17,491154	+3,478897	58
243 6343,0	+25,150443	+53,283054	+19,566741	58	243 6378,0	-57,160003	+10,940535	+1,150155	58
243 6343,5	+18,749131	+55,432605	+19,986206	58	243 6378,5	-57,928010	+4,230785	+1,194531	58
243 6344,0	+12,123483	+56,908521	+20,163540	58	243 6379,0	-57,835712	-2,540682	-3,520999	58
243 6344,5	+5,353044	+57,683561	+20,093325	58	243 6379,5	-56,880166	-9,274406	-5,795001	58
243 6345,0	-1,478882	+57,738459	+19,773069	58	243 6380,0	-55,072236	-15,870643	-7,982815	58
243 6345,5	-8,286085	+57,062385	+19,203302	58	243 6380,5	-52,436574	-22,231145	-10,051869	58
243 6346,0	-14,980407	+55,653552	+18,387746	58	243 6381,0	-49,011397	-28,261046	-11,971367	58
243 6346,5	-21,472767	+53,519610	+17,333406	58	243 6381,5	-44,847881	-33,870634	-13,712875	58
243 6347,0	-27,674327	+50,678041	+16,050632	58	243 6382,0	-40,009287	-38,977135	-15,250878	58
243 6347,5	-33,497661	+47,156284	+14,553121	58	243 6382,5	-34,569808	-43,506343	-16,563306	58
243 6348,0	-38,858062	+42,991929	+12,857908	58	243 6383,0	-28,613066	-47,394068	-17,631945	58
243 6348,5	-43,674871	+38,232638	+10,985294	58	243 6383,5	-22,230370	-50,587296	-18,442761	58
243 6349,0	-47,872880	+32,935969	+8,958686	58	243 6384,0	-15,518810	-53,045102	-18,986124	58
243 6349,5	-51,383781	+27,169022	+6,804437	58	243 6384,5	-8,579218	-54,739254	-19,256928	58
243 6350,0	-54,147564	+21,007848	+4,551557	58	243 6385,0	-1,514052	-55,654327	-19,254526	58
243 6350,5	-56,114102	+14,536725	+2,231393	58	243 6385,5	+5,574639	-55,787582	-18,982597	58
243 6351,0	-57,244435	+7,847052	-0,122803	58	243 6386,0	+12,587132	-55,148469	-18,448895	58
243 6351,5	-57,512149	+1,036078	-2,476400	58	243 6386,5	+19,427757	-53,757835	-17,664884	58
243 6352,0	-56,904511	-5,794687	-4,793962	58	243 6387,0	+26,006377	-51,646908	-16,645342	58
243 6352,5	-55,423342	-12,541328	-7,039941	58	243 6387,5	+32,239541	-48,856072	-15,407874	58
243 6353,0	-53,085653	-19,099616	-9,179423	58	243 6388,0	+38,051402	-45,433655	-13,972462	58
243 6353,5	-49,923759	-25,367289	-11,178905	58	243 6388,5	+43,374296	-41,434588	-12,360976	58
243 6354,0	-45,985001	-31,246404	-13,007108	58	243 6389,0	+48,149091	-36,919143	-10,596721	58
243 6354,5	-41,330910	-36,645676	-14,635715	58	243 6389,5	+52,325298	-31,951771	-8,704046	58
243 6355,0	-36,035945	-41,482714	-16,040087	58	Epoch 1959.0				
243 6355,5	-30,185664	-45,685927	-17,199837	58	243 6381,0	-49,003916	-28,272000	-11,976129	59
243 6356,0	-23,874451	-49,196079	-18,099235	58	243 6381,5	-44,838977	-33,880657	-13,717232	59
243 6356,5	-17,203602	-51,967382	-18,727487	58	243 6382,0	-39,999093	-38,986076	-15,254765	59
243 6357,0	-10,277750	-53,968073	-19,078792	58	243 6382,5	-34,558474	-43,514069	-16,566665	59
243 6357,5	-3,203322	-55,180426	-19,152235	58	243 6383,0	-28,600759	-47,400462	-17,634724	59
243 6358,0	+3,914322	-56,600415	-18,951546	58	243 6383,5	-22,217270	-50,592263	-18,444920	59
243 6358,5	+10,972927	-55,236804	-18,484682	58	243 6384,0	-15,505109	-53,048569	-18,987631	59
243 6359,0	+17,875109	-54,110068	-17,763386	58	243 6384,5	-8,565112	-54,741170	-19,257761	59
243 6359,5	+24,529752	-52,251095	-16,802655	58	243 6385,0	-1,499742	-55,654664	-19,254672	59
243 6360,0	+30,853025	-49,699725	-15,620204	58	243 6385,5	+5,588952	-55,786335	-18,982054	59
243 6360,5	+36,769067	-46,503361	-14,235943	58	243 6386,0	+12,601250	-55,145654	-18,447671	59
243 6361,0	+42,210336	-42,715591	-12,671505	58	243 6386,5	+19,441488	-53,753492	-17,662996	59
243 6361,5	+47,117785	-38,395004	-10,949812	58	243 6387,0	+26,019537	-51,641094	-16,642814	59
243 6362,0	+51,440709	-33,603970	-9,094686	58	243 6387,5	+32,251957	-48,848864	-15,404741	59
243 6362,5	+55,136643	-28,407816	-7,130547	58	243 6388,0	+38,062913	-45,425149	-13,968764	59
243 6363,0	+58,171080	-22,873959	-5,082161	58	243 6388,5	+43,384756	-41,424892	-12,356760	59
243 6363,5	+60,517117	-17,071246	-2,974404	58	243 6389,0	+48,158371	-36,908381	-10,592042	59
243 6364,0	+62,155266	-11,069454	-0,832115	58	243 6389,5	+52,333283	-31,940075	-8,698961	59
243 6364,5	+63,073053	-4,938793	+1,320053	58	243 6390,0	+55,867633	-26,587536	-6,702529	59
243 6365,0	+63,264963	+1,250407	+3,457742	58	243 6390,5	+58,727956	-20,920468	-4,628117	59
243 6365,5	+62,732111	+7,428050	+5,556987	58	243 6391,0	+60,888884	-15,009903	-2,501177	59
243 6366,0	+61,482270	+13,524570	+7,594328	58					

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z		J.D.	x	y	z	
243 6391,5	+62,332876	- 8,927544	- 0,347041	59	243 6426,5	+ 5,387380	+57,351244	+19,780574	59
243 6392,0	+63,049885	- 2,745196	+ 1,809273	59	243 6427,0	- 1,477189	+57,240442	+19,473462	59
243 6392,5	+63,036965	+ 3,465693	+ 3,943183	59	243 6427,5	- 8,328530	+56,380831	+18,912116	59
243 6393,0	+62,298084	+ 9,634420	+ 6,030670	59	243 6428,0	-15,074718	+54,768263	+18,098792	59
243 6393,5	+60,843818	+15,691320	+ 8,048377	59	243 6428,5	-21,621218	+52,408964	+17,039359	59
243 6394,0	+58,691250	+21,568074	+ 9,973688	59	243 6429,0	-27,872256	+49,320410	+15,743558	59
243 6394,5	+55,863806	+27,197979	+11,784820	59	243 6429,5	-33,732562	+45,532124	+14,225192	59
243 6395,0	+52,391253	+32,516248	+13,460930	59	243 6430,0	-39,109283	+41,086041	+12,502173	59
243 6395,5	+48,309666	+37,460350	+14,982215	59	243 6430,5	-43,914220	+36,036696	+10,596514	59
243 6396,0	+43,661399	+41,970345	+16,330029	59	243 6431,0	-48,066074	+30,450818	+ 8,534082	59
243 6396,5	+38,495239	+45,989422	+17,487080	59	243 6431,5	-51,492774	+24,406557	+ 6,344257	59
243 6397,0	+32,866342	+49,464399	+18,437581	59	243 6432,0	-54,133686	+17,992190	+ 4,059399	59
243 6397,5	+26,836242	+52,346388	+19,167486	59	243 6432,5	-55,941370	+11,304309	+ 1,714177	59
243 6398,0	+20,472746	+54,591535	+19,664744	59	243 6433,0	-56,883162	+ 4,445736	- 0,655219	59
243 6398,5	+13,849741	+56,161879	+19,919563	59	243 6433,5	-56,942096	- 2,476915	- 3,011930	59
243 6399,0	+ 7,046808	+57,026271	+19,924729	59	243 6434,0	-56,117274	- 9,355775	- 5,319308	59
243 6399,5	+ 0,148666	+57,161324	+19,675893	59	243 6434,5	-54,423816	-16,084252	- 7,541770	59
243 6400,0	- 6,755597	+56,552346	+19,171860	59	243 6435,0	-51,892080	-22,559439	- 9,645585	59
243 6400,5	-13,573551	+55,194406	+18,414911	59	243 6435,5	-48,566610	-28,684265	-11,599566	59
243 6401,0	-20,210657	+53,093000	+17,410974	59	243 6436,0	-44,504675	-34,369348	-13,375631	59
243 6401,5	-26,571824	+50,264886	+16,169851	59	243 6436,5	-39,774542	-39,534449	-14,949243	59
243 6402,0	-32,563071	+46,738413	+14,705249	59	243 6437,0	-34,453702	-44,109662	-16,299723	59
243 6402,5	-38,093385	+42,553722	+13,034785	59	243 6437,5	-28,626910	-48,036092	-17,410422	59
243 6403,0	-43,076728	+37,762625	+11,179840	59	243 6438,0	-22,384399	-51,266392	-18,268819	59
243 6403,5	-47,433915	+32,428017	+ 9,165297	59	243 6438,5	-15,820052	-53,764851	-18,866484	59
243 6404,0	-51,094524	+26,623039	+ 7,019165	59	243 6439,0	- 9,029761	-55,507446	-19,199024	59
243 6404,5	-53,998583	+20,429874	+ 4,772089	59	243 6439,5	- 2,109853	-56,481454	-19,265902	59
243 6405,0	-56,097966	+13,938219	+ 2,456787	59	243 6440,0	+ 4,844290	-56,685226	-19,070289	59
243 6405,5	-57,357621	+ 7,243602	+ 0,107401	59	243 6440,5	+11,739523	-56,127508	-18,618792	59
243 6406,0	-57,756196	+ 0,445446	- 2,241171	59	243 6441,0	+18,486072	-54,826913	-17,921228	59
243 6406,5	-57,286676	- 6,354845	- 4,553966	59	243 6441,5	+24,998559	-52,811223	-16,990342	59
243 6407,0	-55,956224	-13,055900	- 6,796637	59	243 6442,0	+31,196839	-50,116532	-15,841490	59
243 6407,5	-53,786077	-19,558304	- 8,936096	59	243 6442,5	+37,006830	-46,786573	-14,492373	59
243 6408,0	-50,810900	-25,766424	-10,941123	59	243 6443,0	+42,361074	-42,871725	-12,962679	59
243 6408,5	-47,077938	-31,590087	-12,782893	59	243 6443,5	+47,199321	-38,428237	-11,273794	59
243 6409,0	-42,645954	-36,946117	-14,435451	59	243 6444,0	+51,468887	-33,517271	- 9,448473	59
243 6409,5	-37,583937	-41,759590	-15,876100	59	243 6444,5	+55,124928	-28,204013	- 7,510513	59
243 6410,0	-31,969743	-45,965026	-17,085740	59	243 6445,0	+58,130609	-22,556802	- 5,484471	59
243 6410,5	-25,888524	-49,507227	-18,049089	59	243 6445,5	+60,457140	-16,646251	- 3,395348	59
243 6411,0	-19,431117	-52,341940	-18,754845	59	243 6446,0	+62,083758	-10,544454	- 1,268331	59
243 6411,5	-12,692418	-54,436370	-19,195776	59	243 6446,5	+62,997573	- 4,324213	+ 0,871461	59
243 6412,0	- 5,769674	-55,769310	-19,368715	59	243 6447,0	+63,193394	+ 1,941652	+ 2,999218	59
243 6412,5	+ 1,239152	-56,331223	-19,274500	59	243 6447,5	+62,673446	+ 8,180950	+ 5,090620	59
243 6413,0	+ 8,236993	-56,123932	-18,917809	59	243 6448,0	+61,447133	+14,322663	+ 7,122040	59
243 6413,5	+15,129189	-55,160243	-18,306960	59	243 6448,5	+59,530648	+20,297451	+ 9,070681	59
243 6414,0	+21,824875	-53,463262	-17,453629	59	243 6449,0	+56,946796	+26,038092	+10,914727	59
243 6414,5	+28,238247	-51,065704	-16,372554	59	243 6449,5	+53,724592	+31,479841	+12,633438	59
243 6415,0	+34,289576	-48,008826	-15,081132	59	243 6450,0	+49,899052	+36,560798	+14,207280	59
243 6415,5	+39,906106	-44,341502	-13,599059	59	243 6450,5	+45,510974	+41,222229	+15,618002	59
243 6416,0	+45,022694	-40,119102	-11,947925	59	243 6451,0	+40,606678	+45,408830	+16,848727	59
243 6416,5	+49,582303	-35,402410	-10,150833	59	243 6451,5	+35,237926	+49,069134	+17,884088	59
243 6417,0	+53,536211	-30,256505	- 8,231985	59	243 6452,0	+29,461721	+52,155791	+18,710302	59
243 6417,5	+56,844170	-24,749743	- 6,216351	59	243 6452,5	+23,340231	+54,626003	+19,315325	59
243 6418,0	+59,474322	-18,952794	- 4,129332	59	243 6453,0	+16,940670	+56,441993	+19,689003	59
243 6418,5	+61,403095	-12,937768	- 1,996477	59	243 6453,5	+10,335153	+57,571542	+19,823231	59
243 6419,0	+62,614866	- 6,777424	+ 0,156788	59	243 6454,0	+ 3,600513	+57,988648	+19,712192	59
243 6419,5	+63,101769	- 0,544528	+ 2,305356	59	243 6454,5	- 3,181992	+57,674208	+19,352555	59
243 6420,0	+62,863293	+ 5,688740	+ 4,424631	59	243 6455,0	- 9,927077	+56,616923	+18,743763	59
243 6420,5	+61,905965	+11,851246	+ 6,490666	59	243 6455,5	-16,546036	+54,814118	+17,888301	59
243 6421,0	+60,243127	+17,873321	+ 8,480301	59	243 6456,0	-22,947547	+52,272746	+16,791984	59
243 6421,5	+57,894589	+23,687096	+10,371259	59	243 6456,5	-29,038794	+49,010296	+15,464237	59
243 6422,0	+54,886387	+29,226799	+12,142232	59	243 6457,0	-34,726820	+45,055619	+13,918302	59
243 6422,5	+51,250693	+34,429046	+13,772973	59	243 6457,5	-39,920286	+40,449681	+12,171446	59
243 6423,0	+47,025660	+39,233145	+15,244401	59	243 6458,0	-44,531470	+35,245965	+10,245005	59
243 6423,5	+42,255350	+43,581398	+16,538692	59	243 6458,5	-48,478607	+29,510573	+ 8,164340	59
243 6424,0	+36,989700	+47,419470	+17,639403	59	243 6459,0	-51,688273	+23,321755	+ 5,958581	59
243 6424,5	+31,284493	+50,696778	+18,531600	59	243 6459,5	-54,097947	+16,769010	+ 3,660231	59
243 6425,0	+25,201376	+53,367052	+19,202050	59	243 6460,0	-55,658317	+ 9,951505	+ 1,304549	59
243 6425,5	+18,807820	+55,388974	+19,639428	59	243 6460,5	-56,335314	+ 2,975975	- 1,071229	59
243 6426,0	+12,176950	+56,726796	+19,834534	59	243 6461,0	-56,111675	- 4,045847	- 3,428833	59

J.D.	x	y	z	J.D.	x	y	z		
243 6461,5	-54,987754	-11,000191	- 5,729960	59	243 6496,5	+31,199891	-49,770847	-15,533504	59
243 6462,0	-52,981762	-17,774311	- 7,937336	59	243 6497,0	+37,059365	-46,543584	-14,234711	59
243 6462,5	-50,129048	-24,259508	-10,015693	59	243 6497,5	+42,449270	-42,722182	-12,754061	59
243 6463,0	-46,480956	-30,353925	-11,932674	59	243 6498,0	+47,312172	-38,364838	-11,113180	59
243 6463,5	-42,102849	-35,964887	-13,659544	59	243 6498,5	+51,598517	-33,533638	- 9,334702	59
243 6464,0	-37,071992	-41,010811	-15,171752	59	243 6499,0	+55,266468	-28,293713	- 7,441996	59
243 6464,5	-31,474990	-45,422442	-16,449250	59	243 6499,5	+58,281886	-22,712616	- 5,458957	59
243 6465,0	-25,405364	-49,143680	-17,476677	59	243 6500,0	+60,618112	-16,859668	- 3,409796	59
243 6465,5	-18,961051	-52,131755	-18,243330	59	243 6500,5	+62,255992	-10,805438	- 1,318866	59
243 6466,0	-12,242221	-54,357100	-18,743034	59	243 6501,0	+63,183592	- 4,621165	+ 0,789525	59
243 6466,5	- 5,349293	-55,802886	-18,973911	59	243 6501,5	+63,396228	+ 1,621706	+ 2,891263	59
243 6467,0	+ 1,618772	-56,464264	-18,938058	59	243 6502,0	+62,896347	+ 7,852052	+ 4,962602	59
243 6467,5	+ 8,565873	-56,347531	-18,641221	59	243 6502,5	+61,693292	+13,999562	+ 6,980326	59
243 6468,0	+15,399920	-55,469233	-18,092438	59	243 6503,0	+59,803278	+19,995228	+ 8,921903	59
243 6468,5	+22,033741	-53,855109	-17,303651	59	243 6503,5	+57,249253	+25,771857	+10,765659	59
243 6469,0	+28,385821	-51,539232	-16,289395	59	243 6504,0	+54,060584	+31,264545	+12,490914	59
243 6469,5	+34,380834	-48,563015	-15,066437	59	243 6504,5	+50,272977	+36,411200	+14,078170	59
243 6470,0	+39,950117	-44,974371	-13,653480	59	243 6505,0	+45,928186	+41,153047	+15,509257	59
243 6470,5	+45,031945	-40,826837	-12,070841	59	243 6505,5	+41,073688	+45,435063	+16,767464	59
243 6471,0	+49,571816	-36,178773	-10,340201	59	243 6506,0	+35,762387	+49,206466	+17,837712	59
243 6471,5	+53,522654	-31,092642	- 8,848322	59	243 6506,5	+30,052295	+52,421217	+18,706681	59
243 6472,0	+56,844883	-25,634200	- 6,526798	59	243 6507,0	+24,006095	+55,038348	+19,362925	59
243 6472,5	+59,506550	-19,871844	- 4,491811	59	243 6507,5	+17,690780	+57,022491	+19,797026	59
243 6473,0	+61,483342	-13,875884	- 2,403905	59	243 6508,0	+11,177210	+58,344230	+20,001706	59
243 6473,5	+62,758565	- 7,717877	- 0,287745	59	243 6508,5	+ 4,539639	+58,980501	+19,971928	59
243 6474,0	+63,323071	- 1,469977	+ 1,832086	59	243 6509,0	- 2,144748	+58,914995	+19,705026	59
243 6474,5	+63,175144	+ 4,795714	+ 3,931302	59	243 6509,5	- 8,796357	+58,138594	+19,200833	59
243 6475,0	+62,320337	+11,007716	+ 5,986108	59	243 6510,0	-15,333767	+56,649738	+18,461777	59
243 6475,5	+60,771276	+17,095775	+ 7,973384	59	243 6510,5	-21,674334	+54,454791	+17,492986	59
243 6476,0	+58,547451	+22,991384	+ 9,870854	59	243 6511,0	-27,734913	+51,568568	+16,302444	59
243 6476,5	+55,674903	+28,628289	+11,657259	59	243 6511,5	-33,432622	+48,014635	+14,901053	59
243 6477,0	+52,185961	+33,942949	+13,312481	59	243 6512,0	-38,685828	+43,825808	+13,302771	59
243 6477,5	+48,118991	+38,875002	+14,817700	59	243 6512,5	-43,415157	+39,044432	+11,524671	59
243 6478,0	+43,518008	+43,367603	+16,155493	59	243 6513,0	-47,544844	+33,722764	+ 9,587017	59
243 6478,5	+38,432431	+47,367834	+17,309951	59	243 6513,5	-51,004072	+27,923010	+ 7,513231	59
243 6479,0	+32,916812	+50,827066	+18,266809	59	243 6514,0	-53,728677	+21,717365	+ 5,329845	59
243 6479,5	+27,030544	+53,701337	+19,013536	59	243 6514,5	-55,662901	+15,187641	+ 3,066316	59
243 6480,0	+20,837573	+55,951652	+19,539441	59	243 6515,0	-56,761286	+ 8,424633	+ 0,754746	59
243 6480,5	+14,406177	+57,544482	+19,835830	59	243 6515,5	-56,990651	+ 1,527035	- 1,570557	59
243 6481,0	+ 7,808641	+58,452085	+19,896105	59	243 6516,0	-56,331862	- 5,400109	- 3,873655	59
243 6481,5	+ 1,121001	+58,653020	+19,715916	59	243 6516,5	-54,781464	-12,247426	- 6,117730	59
243 6482,0	- 5,577325	+58,132687	+19,293332	59	243 6517,0	-52,352945	-18,903725	- 8,265949	59
243 6482,5	-12,203929	+56,883919	+18,629033	59	243 6517,5	-49,077239	-25,258823	-10,282453	59
243 6483,0	-18,673939	+54,907562	+17,726469	59	243 6518,0	-45,002798	-31,206645	-12,133386	59
243 6483,5	-24,900701	+52,213275	+16,592114	59	243 6518,5	-40,194703	-36,648343	-13,787918	59
243 6484,0	-30,796592	+48,820200	+15,235657	59	243 6519,0	-34,733021	-41,495143	-15,219131	59
243 6484,5	-36,274130	+44,757683	+13,670196	59	243 6519,5	-28,710573	-45,670914	-16,404819	59
243 6485,0	-41,247246	+40,065903	+11,912409	59	243 6520,0	-22,230049	-49,113989	-17,327970	59
243 6485,5	-45,632977	+34,796464	+ 9,982688	59	243 6520,5	-15,400877	-51,778404	-17,977091	59
243 6486,0	-49,353261	+29,012569	+ 7,905128	59	243 6521,0	- 8,336004	-53,634334	-18,346224	59
243 6486,5	-52,337141	+22,789065	+ 5,707462	59	243 6521,5	- 1,148807	-54,667829	-18,434758	59
243 6487,0	-54,523046	+16,211910	+ 3,420800	59	243 6522,0	+ 6,049665	-54,880033	-18,247045	59
243 6487,5	-55,861181	+ 9,377202	+ 1,079214	59	243 6522,5	+13,153023	-54,285901	-17,791910	59
243 6488,0	-56,315768	+ 2,389588	- 1,280887	59	243 6523,0	+20,061353	-52,912578	-17,082031	59
243 6488,5	-55,867074	- 4,639901	- 3,621541	59	243 6523,5	+26,682543	-50,797760	-16,133340	59
243 6489,0	-54,512868	-11,596550	- 5,904202	59	243 6524,0	+32,933139	-47,987926	-14,964410	59
243 6489,5	-52,269326	-18,365049	- 8,090814	59	243 6524,5	+38,738776	-44,536687	-13,595870	59
243 6490,0	-49,170970	-24,832794	-10,144899	59	243 6525,0	+44,034401	-40,503388	-12,049946	59
243 6490,5	-45,269994	-30,893182	-12,032656	59	243 6525,5	+48,764113	-35,951682	-10,349979	59
243 6491,0	-40,634546	-36,448604	-13,723890	59	243 6526,0	+52,880961	-30,948469	- 8,520075	59
243 6491,5	-35,346537	-41,413002	-15,192790	59	243 6526,5	+56,346683	-25,562994	- 6,584820	59
243 6492,0	-29,498856	-45,713774	-16,418463	59	243 6527,0	+59,131252	-19,865987	- 4,568996	59
243 6492,5	-23,192374	-49,292994	-17,385229	59	243 6527,5	+61,212613	-13,929093	- 2,497411	59
243 6493,0	-16,532917	-52,107923	-18,082687	59	243 6528,0	+62,576295	- 7,824290	- 0,394725	59
243 6493,5	- 9,628404	-54,130970	-18,505577	59	243 6528,5	+63,215138	-16,234558	+ 1,714702	59
243 6494,0	- 2,586252	-55,348917	-18,653444	59	243 6529,0	+63,128974	+ 4,602035	+ 3,806922	59
243 6494,5	+ 4,488738	-55,762073	-18,530269	59	243 6529,5	+62,324577	+10,781697	+ 5,858520	59
243 6495,0	+11,496166	-55,382946	-18,143956	59	243 6530,0	+60,815269	+16,846272	+ 7,846732	59
243 6495,5	+18,341327	-54,234830	-17,505822	59	243 6530,5	+58,620990	+22,728126	+ 9,749554	59
243 6496,0	+24,936169	-52,350513	-16,630111	59	243 6531,0	+55,768002	+28,361600	+11,545872	59

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z	J.D.	x	y	z		
243 6531,5	+52,288920	+33,683469	+13,215604	59	243 6566,5	-39,117276	+43,711440	+13,628943	59
243 6532,0	+48,222444	+38,633359	+14,739826	59	243 6567,0	-43,958054	+39,024793	+11,901477	59
243 6532,5	+43,613271	+43,154228	+16,100936	59	243 6567,5	-48,205993	+33,820566	+10,017414	59
243 6533,0	+38,511879	+47,192878	+17,282824	59	243 6568,0	-51,795745	+28,162580	+8,000156	59
243 6533,5	+32,974240	+50,700453	+18,271010	59	243 6568,5	-54,669791	+22,122628	+5,875549	59
243 6534,0	+27,061547	+53,633029	+19,052854	59	243 6569,0	-56,779472	+15,779600	+3,671553	59
243 6534,5	+20,839819	+55,952128	+19,617697	59	243 6569,5	-58,086172	+9,218590	+1,417912	59
243 6535,0	+14,379401	+57,625204	+19,957022	59	243 6570,0	-58,562209	+2,529767	-0,854247	59
243 6535,5	+7,754498	+58,626260	+20,064631	59	243 6570,5	-58,191701	-4,192845	-3,112850	59
243 6536,0	+1,042518	+58,936202	+19,936751	59	243 6571,0	-56,971294	-10,852774	-5,325374	59
243 6536,5	-5,676569	+58,543376	+19,572189	59	243 6571,5	-54,910564	-17,352592	-7,459345	59
243 6537,0	-12,320969	+57,443951	+18,972439	59	243 6572,0	-52,032510	-23,595570	-9,482929	59
243 6537,5	-18,807870	+55,642215	+18,141746	59	243 6572,5	-48,373469	-29,487402	-11,365489	59
243 6538,0	-25,054282	+53,150873	+17,087190	59	243 6573,0	-43,982984	-34,938029	-13,078196	59
243 6538,5	-30,977967	+49,991331	+15,818743	59	243 6573,5	-38,923273	-39,863471	-14,594641	59
243 6539,0	-36,498350	+46,193716	+14,349254	59	243 6574,0	-33,268393	-44,187705	-15,891421	59
243 6539,5	-41,537561	+41,797073	+12,694463	59	243 6574,5	-27,102958	-47,844317	-16,948674	59
243 6540,0	-46,021502	+36,849295	+10,872967	59	243 6575,0	-20,520624	-50,778137	-17,750571	59
243 6540,5	-49,880981	+31,407078	+8,906143	59	243 6575,5	-13,622158	-52,946490	-18,285685	59
243 6541,0	-53,052879	+25,535653	+6,818033	59	243 6576,0	-6,513291	-54,320189	-18,547265	59
243 6541,5	-55,481476	+19,308498	+4,635215	59	243 6576,5	+0,697639	-54,884028	-18,533328	59
243 6542,0	-57,119712	+12,806776	+2,386546	59	243 6577,0	+7,902070	-54,636974	-18,246653	59
243 6542,5	-57,930590	+6,118605	+0,102893	59	243 6577,5	+14,993598	-53,591795	-17,694594	59
243 6543,0	-57,888429	-0,661927	-2,183245	59	243 6578,0	+21,870163	-51,774260	-16,888742	59
243 6543,5	-56,980210	-7,436012	-4,438203	59	243 6578,5	+28,436022	-49,222123	-15,844534	59
243 6544,0	-55,206714	-14,101699	-6,627719	59	243 6579,0	+34,603281	-45,983584	-14,580676	59
243 6544,5	-52,583413	-20,555768	-8,717579	59	243 6579,5	+40,293197	-42,115814	-13,118628	59
243 6545,0	-49,141053	-26,695876	-10,674382	59	243 6580,0	+45,436906	-37,683186	-11,481976	59
243 6545,5	-44,925854	-32,422960	-12,466331	59	243 6580,5	+49,975948	-32,755687	-9,695888	59
243 6546,0	-39,999113	-37,643742	-14,064073	59	243 6581,0	+53,862337	-27,407274	-7,786559	59
243 6546,5	-34,436236	-42,273239	-15,441512	59	243 6581,5	+57,058431	-21,714473	-5,780746	59
243 6547,0	-28,325263	-46,237163	-16,576564	59	243 6582,0	+59,536530	-15,755095	-3,705342	59
243 6547,5	-21,764679	-49,473895	-17,451755	59	243 6582,5	+61,278439	-9,607193	-1,587046	59
243 6548,0	-14,860940	-51,936126	-18,054680	59	243 6583,0	+62,274794	-3,348153	+0,547918	59
243 6548,5	-7,725601	-53,591849	-18,378248	59	243 6583,5	+62,524518	+2,945960	+2,674016	59
243 6549,0	-0,472332	-54,424732	-18,420716	59	243 6584,0	+62,034227	+9,200968	+4,766564	59
243 6549,5	+6,785971	-54,433885	-18,185494	59	243 6584,5	+60,817622	+15,344964	+6,801848	59
243 6550,0	+13,939843	-53,633052	-17,680815	59	243 6585,0	+58,895072	+21,308651	+8,757212	59
243 6550,5	+20,885559	-52,049352	-16,919199	59	243 6585,5	+56,293143	+27,025551	+10,611133	59
243 6551,0	+27,526935	-49,721644	-15,916872	59	243 6586,0	+53,044302	+32,432254	+12,343266	59
243 6551,5	+33,776695	-46,698816	-14,693137	59	243 6586,5	+49,186594	+37,468559	+13,934502	59
243 6552,0	+39,557311	-43,037921	-13,269711	59	243 6587,0	+44,763566	+42,077760	+15,367054	59
243 6552,5	+44,801470	-38,802424	-11,670134	59	243 6587,5	+39,823961	+46,206809	+16,624499	59
243 6553,0	+49,452102	-34,060534	-9,919197	59	243 6588,0	+34,421728	+49,806681	+17,691894	59
243 6553,5	+53,462287	-28,883846	-8,042489	59	243 6588,5	+28,615863	+52,832719	+18,555896	59
243 6554,0	+56,794805	-23,346011	-6,065975	59	243 6589,0	+22,470286	+55,245052	+19,204888	59
243 6554,5	+59,421668	-17,521779	-4,015679	59	243 6589,5	+16,053690	+57,009148	+19,629167	59
243 6555,0	+61,323606	-11,486149	-1,917426	59	243 6590,0	+9,439278	+58,096351	+19,821107	59
243 6555,5	+62,489544	-5,313745	+0,203361	59	243 6590,5	+2,704435	+58,484649	+19,775406	59
243 6556,0	+62,916065	+0,921722	+2,321807	59	243 6591,0	-4,069772	+58,159222	+19,489270	59
243 6556,5	+62,606982	+7,147855	+4,413718	59	243 6591,5	-10,799232	+57,113263	+18,962653	59
243 6557,0	+61,572918	+13,293873	+6,455659	59	243 6592,0	-17,397607	+55,348631	+18,198459	59
243 6557,5	+59,831067	+19,290927	+8,425051	59	243 6592,5	-23,777356	+52,876510	+17,202742	59
243 6558,0	+57,404819	+25,072318	+10,300234	59	243 6593,0	-29,850936	+49,717921	+15,984836	59
243 6558,5	+54,323692	+30,573786	+12,060555	59	243 6593,5	-35,532166	+45,904075	+14,557447	59
243 6559,0	+50,623145	+35,733812	+13,686470	59	243 6594,0	-40,737744	+41,476526	+12,936658	59
243 6559,5	+46,344387	+40,493869	+15,159615	59	243 6594,5	-45,388869	+36,487126	+11,141874	59
243 6560,0	+41,534405	+44,798898	+16,462961	59	243 6595,0	-49,412892	+30,997628	+9,195656	59
243 6560,5	+36,245735	+48,597662	+17,580938	59	243 6595,5	-52,744938	+25,079047	+7,123447	59
243 6561,0	+30,536363	+51,843270	+18,499586	59	243 6596,0	-55,329426	+18,810707	+4,953231	59
243 6561,5	+24,469502	+54,493701	+19,206745	59	243 6596,5	-57,121458	+12,279056	+2,715096	59
243 6562,0	+18,113315	+56,512437	+19,692247	59	243 6597,0	-58,087956	+5,576229	+0,440717	59
243 6562,5	+11,540518	+57,869015	+19,948083	59	243 6597,5	-58,208497	-1,201578	-1,837195	59
243 6563,0	+4,827883	+58,539720	+19,968641	59	243 6598,0	-57,476013	-7,955822	-4,085497	59
243 6563,5	-1,944365	+58,508169	+19,750860	59	243 6598,5	-55,896964	-14,587424	-6,271213	59
243 6564,0	-8,693306	+57,765903	+19,294420	59	243 6599,0	-53,491382	-20,998587	-8,362149	59
243 6564,5	-15,334200	+56,312930	+18,601893	59	243 6599,5	-50,292533	-27,094559	-10,327475	59
243 6565,0	-21,781483	+54,158184	+17,678869	59	243 6600,0	-46,346373	-32,785356	-12,138270	59
243 6565,5	-27,949858	+51,319752	+16,534005	59	243 6600,5	-41,710709	-37,987336	-13,768050	59
243 6566,0	-33,755494	+47,825177	+15,179073	59	243 6601,0	-36,454141	-42,624655	-15,193201	59

J.D.	x	y	z	J.D.	x	y	z		
243 6601,5	-30,654820	-46,630535	-16,393388	59	243 6636,5	+58,823020	-18,212644	-4,753466	59
243 6602,0	-24,399086	-49,948413	-17,351904	59	243 6637,0	+60,770034	-12,062949	-2,671808	59
243 6602,5	-17,779873	-52,532859	-18,055922	59	243 6637,5	+61,987481	-5,768188	-0,558566	59
243 6603,0	-10,895045	-54,350241	-18,496680	59	243 6638,0	+62,469299	+0,593923	+1,560382	59
243 6603,5	-3,845625	-55,379181	-18,669591	59	243 6638,5	+62,217853	+6,946673	+3,659679	59
243 6604,0	+3,265995	-55,610838	-18,574290	59	243 6639,0	+61,243610	+13,215122	+5,714748	59
243 6604,5	+10,337905	-55,048788	-18,214539	59	243 6639,5	+59,564544	+19,326753	+7,701985	59
243 6605,0	+17,270434	-53,708721	-17,598089	59	243 6640,0	+57,205689	+25,212027	+9,598944	59
243 6605,5	+23,967886	-51,617920	-16,736460	59	243 6640,5	+54,198591	+30,804851	+11,384461	59
243 6606,0	+30,340044	-48,814349	-15,644596	59	243 6641,0	+50,580824	+36,042963	+13,038796	59
243 6606,5	+36,303612	-45,345741	-14,340525	59	243 6641,5	+46,395435	+40,868214	+14,543682	59
243 6607,0	+41,783307	-41,268308	-12,844897	59	243 6642,0	+41,690582	+45,226853	+15,882430	59
243 6607,5	+46,712747	-36,645435	-11,180532	59	243 6642,5	+36,519048	+49,069661	+17,039963	59
243 6608,0	+51,035118	-31,546331	-9,371956	59	243 6643,0	+30,937998	+52,352251	+18,002895	59
243 6608,5	+54,703498	-26,044602	-7,444893	59	243 6643,5	+25,008584	+55,035184	+18,759568	59
243 6609,0	+57,680954	-20,216877	-5,425840	59	243 6644,0	+18,795741	+57,084197	+19,300126	59
243 6609,5	+59,940457	-14,141572	-3,341622	59	243 6644,5	+12,367925	+58,470463	+19,616592	59
243 6610,0	+61,464585	-7,897711	-1,219031	59	243 6645,0	+5,796929	+59,170937	+19,702968	59
243 6610,5	+62,245093	-1,563928	-0,915508	59	243 6645,5	-0,842397	+59,168632	+19,553333	59
243 6611,0	+62,282356	+4,782407	+3,036213	59	243 6646,0	-7,472378	+58,453195	+19,172016	59
243 6611,5	+61,584823	+11,065876	+5,118161	59	243 6646,5	-14,012891	+57,021305	+18,553730	59
243 6612,0	+60,168458	+17,213611	+7,137464	59	243 6647,0	-20,381801	+54,877331	+17,703765	59
243 6612,5	+58,056079	+23,155704	+9,071405	59	243 6647,5	-26,495581	+52,033994	+16,628203	59
243 6613,0	+55,276898	+28,825570	+10,898523	59	243 6648,0	-32,270070	+48,512946	+15,336092	59
243 6613,5	+51,866056	+34,160219	+12,598712	59	243 6648,5	-37,621530	+44,345547	+13,839670	59
243 6614,0	+47,864134	+39,100424	+14,153260	59	243 6649,0	-42,467844	+39,573319	+12,154502	59
243 6614,5	+43,316898	+43,590937	+15,544893	59	243 6649,5	-46,730054	+34,248472	+10,299611	59
243 6615,0	+38,275006	+47,580676	+16,757861	59	243 6650,0	-50,334200	+28,434111	+8,297505	59
243 6615,5	+32,793757	+51,022894	+17,777958	59	243 6650,5	-53,213164	+22,204055	+6,174081	59
243 6616,0	+26,932972	+53,875445	+18,592624	59	243 6651,0	-55,308920	+15,642390	+3,958425	59
243 6616,5	+20,756824	+56,101089	+19,191028	59	243 6651,5	-56,574600	+8,842454	+1,682428	59
243 6617,0	+14,333691	+57,667842	+19,564188	59	243 6652,0	-56,976509	+1,905339	-0,619750	59
243 6617,5	+7,735995	+58,549425	+19,705112	59	243 6652,5	-56,495952	-5,062097	-2,912385	59
243 6618,0	+1,039970	+58,725841	+19,608990	59	243 6653,0	-55,130426	-11,949652	-5,159006	59
243 6618,5	-5,674658	+58,183948	+19,273353	59	243 6653,5	-52,894493	-18,646553	-7,323330	59
243 6619,0	-12,325123	+56,918173	+18,698329	59	243 6654,0	-49,819763	-25,044348	-9,370221	59
243 6619,5	-18,826245	+54,931238	+17,886845	59	243 6654,5	-45,954355	-31,039847	-11,266652	59
243 6620,0	-25,091227	+52,234869	+16,844854	59	243 6655,0	-41,361556	-36,537790	-12,982547	59
243 6620,5	-31,032723	+48,850549	+15,581564	59	243 6655,5	-36,117953	-41,453162	-14,491518	59
243 6621,0	-36,564121	+44,810104	+14,109588	59	243 6656,0	-30,311230	-45,713116	-15,771436	59
243 6621,5	-41,601051	+40,156094	+12,445053	59	243 6656,5	-24,037515	-49,258129	-16,804766	59
243 6622,0	-46,063149	+34,942079	+10,607640	59	243 6657,0	-17,398835	-52,042827	-17,578778	59
243 6622,5	-49,875955	+29,232475	+8,620496	59	243 6657,5	-10,500521	-54,036135	-18,085539	59
243 6623,0	-52,972862	+23,102032	+6,510007	59	243 6658,0	-3,448830	-55,220993	-18,321766	59
243 6623,5	-55,297070	+16,634975	+4,305479	59	243 6658,5	+3,651155	-55,593792	-18,288594	59
243 6624,0	-56,803497	+9,923702	+2,038654	59	243 6659,0	+10,697353	-55,163497	-17,991244	59
243 6624,5	-57,460211	+3,067033	-0,256906	59	243 6659,5	+17,592177	-53,950532	-17,438622	59
243 6625,0	-57,249760	-3,831791	-2,546503	59	243 6660,0	+24,243753	-51,985750	-16,642956	59
243 6625,5	-56,169902	-10,667379	-4,795091	59	243 6660,5	+30,566853	-49,309184	-15,619351	59
243 6626,0	-54,233817	-17,334584	-6,968050	59	243 6661,0	+36,483597	-45,968915	-14,385409	59
243 6626,5	-51,469918	-23,730885	-9,032002	59	243 6661,5	+41,924014	-42,019961	-12,960850	59
243 6627,0	-47,921135	-29,758661	-10,955531	59	243 6662,0	+46,826361	-37,523169	-11,367130	59
243 6627,5	-43,643724	-35,327236	-12,709833	59	243 6662,5	+51,137392	-32,544190	-9,627107	59
243 6628,0	-38,705810	-40,546422	-14,269275	59	243 6663,0	+54,812491	-27,152531	-7,764725	59
243 6628,5	-33,185652	-44,768951	-15,611810	59	243 6663,5	+57,815731	-21,420609	-5,804689	59
243 6629,0	-27,169810	-48,509539	-16,719304	59	243 6664,0	+60,119839	-15,422896	-3,772196	59
243 6629,5	-20,751165	-51,527577	-17,577705	59	243 6664,5	+61,706121	-9,235062	-1,692655	59
243 6630,0	-14,027051	-53,786601	-18,177168	59	243 6665,0	+62,564293	-2,933197	+0,408582	59
243 6630,5	-7,097357	-55,262495	-18,511999	59	243 6665,5	+62,692323	+3,406947	+2,506446	59
243 6631,0	-0,062804	-55,943503	-18,580626	59	243 6666,0	+62,096080	+9,710668	+4,576401	59
243 6631,5	+6,976710	-55,829793	-18,385415	59	243 6666,5	+60,789037	+15,904966	+6,594635	59
243 6632,0	+13,923602	-54,932990	-17,932470	59	243 6667,0	+58,791995	+21,919173	+8,538262	59
243 6632,5	+20,683967	-53,275555	-17,231419	59	243 6667,5	+56,132577	+27,685495	+10,385498	59
243 6633,0	+27,168791	-50,889997	-16,295085	59	243 6668,0	+52,844798	+33,139500	+12,115813	59
243 6633,5	+33,295022	-47,818002	-15,139211	59	243 6668,5	+48,968717	+38,220609	+13,710069	59
243 6634,0	+38,986477	-44,109476	-13,782099	59	243 6669,0	+44,549856	+42,872413	+15,150634	59
243 6634,5	+44,174671	-39,821608	-12,244285	59	243 6669,5	+39,638838	+47,043104	+16,421494	59
243 6635,0	+48,799364	-35,017708	-10,548142	59	243 6670,0	+34,290868	+50,685673	+17,508327	59
243 6635,5	+52,809073	-29,766186	-8,717526	59	243 6670,5	+28,565346	+53,758245	+18,398586	59
243 6636,0	+56,161356	-24,139406	-6,777400	59	243 6671,0	+22,525425	+56,224249	+19,081567	59

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z	J.D.	x	y	z		
243 6671,5	+ 16,237623	+58,052654	+19,548464	59	243 6706,5	-57,858948	+ 6,750925	+ 1,081123	59
243 6672,0	+ 9,771497	+59,218248	+19,792452	59	243 6707,0	-57,809245	- 0,056461	- 1,181239	59
243 6672,5	+ 3,199238	+59,701758	+19,808728	59	243 6707,5	-56,892522	- 6,867877	- 3,427964	59
243 6673,0	- 3,404648	+59,490232	+19,594625	59	243 6708,0	-55,104672	-13,579370	- 5,624473	59
243 6673,5	- 9,963687	+58,577200	+19,149656	59	243 6708,5	-52,456958	-20,084358	- 7,735611	59
243 6674,0	-16,399843	+56,963153	+18,475665	59	243 6709,0	-48,976995	-26,276030	- 9,726458	59
243 6674,5	-22,633923	+54,655798	+17,576902	59	243 6709,5	-44,709245	-32,050075	-11,563243	59
243 6675,0	-28,586131	+51,670623	+16,460202	59	243 6710,0	-39,714898	-37,307688	-13,214349	59
243 6675,5	-34,176703	+48,031295	+15,135101	59	243 6710,5	-34,070905	-41,958534	-14,651267	59
243 6676,0	-39,326666	+43,770145	+13,613971	59	243 6711,0	-27,868331	-45,923595	-15,849515	59
243 6676,5	-43,958866	+38,928714	+11,912202	59	243 6711,5	-21,210023	-49,137659	-16,789410	59
243 6677,0	-47,999112	+33,558095	+10,048265	59	243 6712,0	-14,207603	-51,551132	-17,456626	59
243 6677,5	-51,377599	+27,719264	+ 8,043808	59	243 6712,5	- 6,978214	-53,131211	-17,842516	59
243 6678,0	-54,030526	+21,483118	+ 5,923640	59	243 6713,0	+ 0,358931	-53,862202	-17,944144	59
243 6678,5	-55,902005	+14,930363	+ 3,715635	59	243 6713,5	+ 7,685794	-53,745201	-17,764125	59
243 6679,0	-56,945979	+ 8,150876	+ 1,450492	59	243 6714,0	+14,888499	-52,797029	-17,310212	59
243 6679,5	-57,128322	+ 1,242727	- 0,838630	59	243 6714,5	+21,859777	-51,048642	-16,594721	59
243 6680,0	-56,428785	- 5,689350	- 3,116675	59	243 6715,0	+28,500924	-48,543388	-15,633915	59
243 6680,5	-54,842696	-12,536009	- 5,347393	59	243 6715,5	+34,723090	-45,334843	-14,447262	59
243 6681,0	-52,382276	-19,185806	- 7,494198	59	243 6716,0	+40,448159	-41,484924	-13,056784	59
243 6681,5	-49,077391	-25,528125	- 9,521161	59	243 6716,5	+45,609029	-37,061836	-11,486378	59
243 6682,0	-44,975462	-31,456291	-11,394024	59	243 6717,0	+50,149713	-32,138451	- 9,761279	59
243 6682,5	-40,140744	-36,870737	-13,081240	59	243 6717,5	+54,024969	-26,790680	- 7,907514	59
243 6683,0	-34,652743	-41,681976	-14,554914	59	243 6718,0	+57,199952	-21,096260	- 5,951528	59
243 6683,5	-28,603913	-45,813101	-15,791590	59	243 6718,5	+59,649622	-15,133634	- 3,919812	59
243 6684,0	-22,096846	-49,201710	-16,772820	59	243 6719,0	+61,358157	- 8,981081	- 1,838619	59
243 6684,5	-15,241166	-51,801153	-17,485515	59	243 6719,5	+62,318390	- 2,716032	+ 0,266230	59
243 6685,0	- 8,150326	-53,580997	-17,922025	59	243 6720,0	+62,531284	+ 3,585539	+ 2,369544	59
243 6685,5	- 0,938538	-54,526858	-18,080022	59	243 6720,5	+62,005313	+ 9,849546	+ 4,446904	59
243 6686,0	+ 6,281992	-54,639658	-17,962192	59	243 6721,0	+60,756120	+16,004227	+ 6,474787	59
243 6686,5	+13,403392	-53,934338	-17,575771	59	243 6721,5	+58,806026	+21,980458	+ 8,430656	59
243 6687,0	+20,323992	-52,438460	-16,932018	59	243 6722,0	+56,183711	+27,712104	+10,293091	59
243 6687,5	+26,949762	-50,190579	-16,045674	59	243 6722,5	+52,923843	+33,136316	+12,041859	59
243 6688,0	+33,195221	-47,238504	-14,934349	59	243 6723,0	+49,066807	+38,193874	+13,658033	59
243 6688,5	+38,984080	-43,637759	-13,618011	59	243 6723,5	+44,658323	+42,829473	+15,124073	59
243 6689,0	+44,249511	-39,450063	-12,118470	59	243 6724,0	+39,749231	+46,992084	+16,423944	59
243 6689,5	+48,934238	-34,742008	-10,458944	59	243 6724,5	+34,395108	+50,635307	+17,543219	59
243 6690,0	+52,990421	-29,583826	- 8,663654	59	243 6725,0	+28,655941	+53,717695	+18,469187	59
243 6690,5	+56,379439	-24,048356	- 6,757489	59	243 6725,5	+22,595761	+56,203140	+19,190969	59
243 6691,0	+59,071697	-18,210163	- 4,765719	59	243 6726,0	+16,282226	+58,061254	+19,699638	59
243 6691,5	+61,046234	-12,144694	- 2,713727	59	243 6726,5	+ 9,786144	+59,267723	+19,988336	59
243 6692,0	+62,290431	- 5,927602	- 0,626793	59	243 6727,0	+ 3,180963	+59,804553	+20,052336	59
243 6692,5	+62,799766	+ 0,365868	+ 1,470105	59	243 6727,5	- 3,457776	+59,660533	+19,889203	59
243 6693,0	+62,577410	+ 6,661475	+ 3,552481	59	243 6728,0	-10,053038	+58,831323	+19,498788	59
243 6693,5	+61,633917	+12,886495	+ 5,596496	59	243 6728,5	-16,526918	+57,319846	+18,883375	59
243 6694,0	+59,987004	+18,970222	+ 7,579129	59	243 6729,0	-22,801336	+55,136431	+18,047698	59
243 6694,5	+57,661137	+24,844454	+ 9,478328	59	243 6729,5	-28,798745	+52,990202	+16,999000	59
243 6695,0	+54,687220	+30,443927	+11,273134	59	243 6730,0	-34,442851	+48,833222	+15,747052	59
243 6695,5	+51,102263	+35,706756	+12,943834	59	243 6730,5	-39,659437	+44,772444	+14,304172	59
243 6696,0	+46,949042	+40,574868	+14,472089	59	243 6731,0	-44,377181	+40,157917	+12,685227	59
243 6696,5	+42,275705	+44,994390	+15,841046	59	243 6731,5	-48,528536	+35,038671	+10,907607	59
243 6697,0	+37,135371	+48,916034	+17,035470	59	243 6732,0	-52,050625	+29,471402	+ 8,991173	59
243 6697,5	+31,585710	+52,295443	+18,041841	59	243 6732,5	-54,886300	+23,520373	+ 6,958209	59
243 6698,0	+25,688530	+55,093552	+18,848473	59	243 6733,0	-56,985154	+17,257109	+ 4,833292	59
243 6698,5	+19,509294	+57,276876	+19,445587	59	243 6733,5	-58,304650	+10,760002	+ 2,643171	59
243 6699,0	+13,116664	+58,817777	+19,825409	59	243 6734,0	-58,811359	+ 4,113770	+ 0,416546	59
243 6699,5	+ 6,582028	+59,694699	+19,982224	59	243 6734,5	-58,482128	- 2,591325	- 1,816198	59
243 6700,0	- 0,020963	+59,892501	+19,912490	59	243 6735,0	-57,305272	- 9,260470	- 4,023347	59
243 6700,5	- 6,616914	+59,402574	+19,614845	59	243 6735,5	-55,281815	-15,795577	- 6,172292	59
243 6701,0	-13,129152	+58,223152	+19,090225	59	243 6736,0	-52,426420	-22,096854	- 8,230068	59
243 6701,5	-19,480267	+56,359510	+18,341904	59	243 6736,5	-48,768252	-28,064686	-10,163997	59
243 6702,0	-25,592646	+53,824201	+17,375569	59	243 6737,0	-44,351413	-33,601781	-11,942402	59
243 6702,5	-31,389066	+50,637258	+16,199375	59	243 6737,5	-39,235017	-38,615582	-13,535416	59
243 6703,0	-36,793362	+46,826545	+14,824039	59	243 6738,0	-33,492680	-43,020787	-14,915805	59
243 6703,5	-41,731106	+42,427849	+13,262884	59	243 6738,5	-27,211402	-46,741841	-16,059788	59
243 6704,0	-46,130524	+37,485280	+11,531919	59	243 6739,0	-20,489867	-49,715294	-16,947784	59
243 6704,5	-49,923436	+32,051359	+ 9,649892	59	243 6739,5	-13,436156	-51,891794	-17,565054	59
243 6705,0	-53,046331	+26,187155	+ 7,638280	59	243 6740,0	- 6,164971	-53,237635	-17,902158	59
243 6705,5	-55,441765	+19,962343	+ 5,521304	59	243 6740,5	+ 1,205462	-53,735597	-17,955197	59
243 6706,0	-57,059656	+13,454935	+ 3,325812	59	243 6741,0	+ 8,556592	-53,385148	-17,725827	59

J.D.	x	y	z		J.D.	x	y	z	
243 6741.5	+15,772657	-52,201970	-17,221049	59	243 6766.5	-18,955018	-51,049034	-17,240619	60
243 6742.0	+22,743515	-50,216825	-16,452796	59	243 6767.0	-11,914153	-52,918907	-17,784434	60
243 6742.5	+29,367037	-47,473973	-15,437361	59	243 6767.5	-4,682930	-53,968833	-18,053481	60
243 6743.0	+35,550937	-44,029156	-14,194705	59	243 6768.0	+2,625895	-54,183735	-18,044057	60
243 6743.5	+41,214072	-39,947528	-12,747745	59	243 6768.5	+9,898601	-53,563773	-17,757535	60
243 6744.0	+46,287162	-35,301475	-11,121611	59	243 6769.0	+17,023233	-52,124283	-17,200294	60
243 6744.5	+50,713044	-30,168553	-9,342965	59	243 6769.5	+23,892182	-49,895083	-16,383472	60
243 6745.0	+54,446519	-24,629608	-7,439378	59	243 6770.0	+30,404588	-46,919383	-15,322568	60
243 6745.5	+57,453900	-18,767186	-5,438797	59	243 6770.5	+36,468334	-43,252239	-14,036912	60
243 6746.0	+59,712361	-12,664134	-3,369109	59	243 6771.0	+42,001678	-38,958753	-12,549042	60
243 6746.5	+61,209230	-6,402538	-1,257779	59	243 6771.5	+46,934322	-34,112044	-10,884027	60
243 6747.0	+61,941156	-0,062831	+0,868414	59	243 6772.0	+51,208023	-28,791211	-9,068772	60
243 6747.5	+61,913312	+6,276864	+2,983590	59	243 6772.5	+54,776852	-23,079397	-7,131380	60
243 6748.0	+61,138703	+12,541217	+5,062920	59	243 6773.0	+57,606889	-17,061919	-5,100534	60
243 6748.5	+59,637531	+18,658072	+7,082735	59	243 6773.5	+59,675858	-10,824713	-3,004986	60
243 6749.0	+57,436502	+24,558722	+9,020607	59	243 6774.0	+60,972302	-4,452945	-0,873103	60
243 6749.5	+54,568421	+30,178118	+10,855408	59	243 6774.5	+61,494881	+1,970064	+1,267481	60
243 6750.0	+51,071745	+35,455087	+12,567378	59	243 6775.0	+61,251404	+8,363707	+3,390137	60
243 6750.5	+46,990247	+40,332520	+14,138185	59	243 6775.5	+60,258014	+14,650745	+5,469450	60
243 6751.0	+42,372590	+44,757518	+15,550955	59	243 6776.0	+58,538322	+20,757759	+7,481355	60
243 6751.5	+37,272228	+48,681730	+16,790387	59	243 6776.5	+56,122665	+26,615469	+9,403246	60
243 6752.0	+31,746967	+52,061495	+17,842799	59	243 6777.0	+53,047456	+32,158972	+11,214030	60
243 6752.5	+25,858788	+54,858250	+18,696243	59	243 6777.5	+49,354557	+37,327854	+12,894159	60
243 6753.0	+19,673507	+57,038755	+19,340590	59	243 6778.0	+45,090877	+42,066346	+14,425683	60
243 6753.5	+13,260432	+58,575533	+19,767658	59	243 6778.5	+40,307927	+46,323403	+15,792268	60
243 6754.0	+6,691995	+59,447230	+19,971342	59	243 6779.0	+35,061480	+50,052815	+16,979216	60
243 6754.5	+0,043255	+59,638965	+19,947704	59	243 6779.5	+29,411314	+53,213368	+17,973527	60
Epoch 1960.0					243 6780.0	+23,420957	+55,769042	+18,763952	60
243 6746.0	+59,715517	-12,650788	-3,363307	60	243 6780.5	+17,157427	+57,689252	+19,341075	60
243 6746.5	+61,210782	-6,388857	-1,251831	60	243 6781.0	+10,690973	+58,949152	+19,697397	60
243 6747.0	+61,941084	-0,048986	+0,874433	60	243 6781.5	+4,094763	+59,529958	+19,827462	60
243 6747.5	+61,911617	+6,290702	+2,989606	60	243 6782.0	-2,555489	+59,419387	+19,727974	60
243 6748.0	+61,135406	+12,554881	+5,068860	60	243 6782.5	-9,181966	+58,612001	+19,397918	60
243 6748.5	+59,632670	+18,671401	+7,088530	60	243 6783.0	-15,705331	+57,109797	+18,838746	60
243 6749.0	+57,430135	+24,571559	+9,026187	60	243 6783.5	-22,045364	+54,922417	+18,054439	60
243 6749.5	+54,560620	+30,190314	+10,860710	60	243 6784.0	-28,121811	+52,067736	+17,051687	60
243 6750.0	+51,062598	+35,466501	+12,572340	60	243 6784.5	-33,855279	+48,572050	+15,839962	60
243 6750.5	+46,979857	+40,343022	+14,142750	60	243 6785.0	-39,168298	+44,470329	+14,431563	60
243 6751.0	+42,361074	+44,766987	+15,555071	60	243 6785.5	-43,986491	+39,806316	+12,841663	60
243 6751.5	+37,259715	+48,690060	+16,794008	60	243 6786.0	-48,239791	+34,632398	+11,088245	60
243 6752.0	+31,733596	+52,068590	+17,845883	60	243 6786.5	-51,863750	+29,009381	+9,192015	60
243 6752.5	+25,844709	+54,864028	+18,698755	60	243 6787.0	-54,800815	+23,005976	+7,176219	60
243 6753.0	+19,658878	+57,043150	+19,342501	60	243 6787.5	-57,001556	+16,698130	+5,066418	60
243 6753.5	+13,245419	+58,578495	+19,768946	60	243 6788.0	-58,425914	+10,168143	+2,890179	60
243 6754.0	+6,676767	+59,448724	+19,971991	60	243 6788.5	-59,044192	+3,503572	+0,676706	60
243 6754.5	+0,027987	+59,638973	+19,947707	60	243 6789.0	-58,838010	-3,204024	-1,543583	60
243 6755.0	-6,623761	+59,141347	+19,694500	60	243 6789.5	-57,800999	-9,860482	-3,739521	60
243 6755.5	-13,199835	+57,955151	+19,213179	60	243 6790.0	-55,938979	-16,370554	-5,879700	60
243 6756.0	-19,620851	+56,087335	+18,507094	60	243 6790.5	-53,270989	-22,639489	-7,932989	60
243 6756.5	-25,807436	+53,552676	+17,582182	60	243 6791.0	-49,828461	-28,574668	-9,869081	60
243 6757.0	-31,681143	+50,374049	+16,447053	60	243 6791.5	-45,655487	-34,087286	-11,659043	60
243 6757.5	-37,165323	+46,582452	+15,112983	60	243 6792.0	-40,808135	-39,093925	-13,275831	60
243 6758.0	-42,186159	+42,217112	+13,593934	60	243 6792.5	-35,353823	-33,518187	-14,694817	60
243 6758.5	-46,673676	+37,325333	+11,906499	60	243 6793.0	-29,370288	-47,292154	-15,894267	60
243 6759.0	-50,562755	+31,962259	+10,069808	60	243 6793.5	-22,944398	-50,357790	-16,855783	60
243 6759.5	-53,794219	+26,190575	+8,105410	60	243 6794.0	-16,170681	-52,668093	-17,564689	60
243 6760.0	-56,315864	+20,080024	+6,037108	60	243 6794.5	-9,149707	-54,188261	-18,010378	60
243 6760.5	-58,083501	+13,706815	+3,890747	60	243 6795.0	-1,986194	-54,896274	-18,186498	60
243 6761.0	-59,061901	+7,152871	+1,693958	60	243 6795.5	+5,212956	-54,783578	-18,091166	60
243 6761.5	-59,225774	+0,504991	-0,524130	60	243 6796.0	+12,340730	-53,855140	-17,726955	60
243 6762.0	-58,560631	-6,146189	-2,733255	60	243 6796.5	+19,292132	-52,129361	-17,100848	60
243 6762.5	-57,063542	-12,707341	-4,902395	60	243 6797.0	+25,966242	-49,637576	-16,224065	60
243 6763.0	-54,743826	-19,083770	-7,000227	60	243 6797.5	+32,268133	-46,423153	-15,111738	60
243 6763.5	-51,623569	-25,180900	-8,995617	60	243 6798.0	+38,110649	-42,540439	-13,782555	60
243 6764.0	-47,737879	-30,905868	-10,858152	60	243 6798.5	+43,415852	-38,053283	-12,258256	60
243 6764.5	-43,135059	-36,169336	-12,558745	60	243 6799.0	+48,116146	-33,033433	-10,563097	60
243 6765.0	-37,876286	-40,887301	-14,070233	60	243 6799.5	+52,155100	-27,558857	-8,732382	60
243 6765.5	-32,035097	-44,983078	-15,368024	60	243 6800.0	+55,487877	-21,711962	-6,766384	60
243 6766.0	-25,696366	-48,389136	-16,430696	60	243 6800.5	+58,081301	-15,577898	-4,720771	60
					243 6801.0	+59,913679	-9,242947	-2,615086	60

RECTANGULAR COORDINATES OF THE MOON 1952-1971

43

J.D.	x	y	z	J.D.	x	y	z		
243 6801,5	+60,974310	- 2,793091	- 0,477773	60	243 6836,5	- 0,098615	+59,937435	+19,668853	60
243 6802,0	+61,262860	+ 3,687221	+ 1,663322	60	243 6837,0	- 6,660068	+59,410116	+19,451143	60
243 6802,5	+60,788570	+10,116131	+ 3,781290	60	243 6837,5	-13,144215	+58,185086	+19,004997	60
243 6803,0	+59,569410	+16,415170	+ 5,850417	60	243 6838,0	-19,474257	+56,268130	+18,332835	60
243 6803,5	+57,631228	+22,509912	+ 7,846402	60	243 6838,5	-25,572822	+53,672244	+17,439455	60
243 6804,0	+55,006888	+28,330418	+ 9,746473	60	243 6839,0	-31,362458	+50,417938	+16,332111	60
243 6804,5	+51,735508	+33,811558	+11,529500	60	243 6839,5	-36,766309	+46,533727	+15,020683	60
243 6805,0	+47,861736	+38,893215	+13,176060	60	243 6840,0	-41,708964	+42,056558	+13,517801	60
243 6805,5	+43,435176	+43,520431	+14,668468	60	243 6840,5	-46,117478	+37,032188	+11,838972	60
243 6806,0	+38,509797	+47,643446	+15,990789	60	243 6841,0	-49,922530	+31,515387	+10,002635	60
243 6806,5	+33,143533	+51,217789	+17,128861	60	243 6841,5	-53,059890	+25,570103	+ 8,030199	60
243 6807,0	+27,397889	+54,204321	+18,070316	60	243 6842,0	-55,472006	+19,269325	+ 5,946001	60
243 6807,5	+21,337681	+56,569375	+18,804601	60	243 6842,5	-57,109615	+12,694590	+ 3,777120	60
243 6808,0	+15,030707	+58,284819	+19,323017	60	243 6843,0	-57,933585	+ 5,935257	+1,553136	60
243 6808,5	+ 8,547543	+59,328287	+19,618780	60	243 6843,5	-57,916530	- 0,912730	- 0,694289	60
243 6809,0	+ 1,961278	+59,683430	+19,687099	60	243 6844,0	-57,044415	- 7,748411	- 2,931935	60
243 6809,5	- 4,652767	+59,340232	+19,525285	60	243 6844,5	-55,317712	-14,467800	- 5,125686	60
243 6810,0	-11,217396	+58,295365	+19,132866	60	243 6845,0	-52,752227	-20,966167	- 7,241282	60
243 6810,5	-17,653971	+56,552642	+18,511710	60	243 6845,5	-49,379434	-27,140542	- 9,245148	60
243 6811,0	-23,882948	+54,123421	+17,666189	60	243 6846,0	-45,246220	-32,892311	-11,105237	60
243 6811,5	-29,824575	+51,027135	+16,603317	60	243 6846,5	-40,413980	-38,129685	-12,791832	60
243 6812,0	-35,399753	+47,291684	+15,332883	60	243 6847,0	-34,957255	-42,769991	-14,278303	60
243 6812,5	-40,531029	+42,953805	+13,867563	60	243 6847,5	-28,961887	-46,741603	-15,541713	60
243 6813,0	-45,143795	+38,059321	+12,223003	60	243 6848,0	-22,522852	-49,985499	-16,563320	60
243 6813,5	-49,167606	+32,663210	+10,417807	60	243 6848,5	-15,741822	-52,456188	-17,328866	60
243 6814,0	-52,537673	+26,829501	+ 8,473529	60	243 6849,0	- 8,724782	-54,122353	-17,828766	60
243 6814,5	-55,196372	+20,630853	+ 6,414484	60	243 6849,5	- 1,579590	-54,966830	-18,058097	60
243 6815,0	-57,094848	+14,147892	+ 4,267543	60	243 6850,0	+ 5,586240	-54,986393	-18,016495	60
243 6815,5	-58,194387	+ 7,468177	+ 2,061784	60	243 6850,5	+12,667554	-54,191079	-17,707942	60
243 6816,0	-58,467943	+ 0,684944	- 0,171946	60	243 6851,0	+19,563347	-52,603311	-17,140449	60
243 6816,5	-57,901079	- 6,104516	- 2,401567	60	243 6851,5	+26,178231	-50,256833	-16,325706	60
243 6817,0	-56,492883	-12,800655	- 4,594353	60	243 6852,0	+32,423694	-47,195586	-15,278703	60
243 6817,5	-54,256423	-19,303636	- 6,717586	60	243 6852,5	+38,219091	-43,472482	-14,017327	60
243 6818,0	-51,218804	-25,515391	- 8,739246	60	243 6853,0	+43,492374	-39,148103	-12,561918	60
243 6818,5	-47,420805	-31,341641	-10,628651	60	243 6853,5	+48,180710	-34,289534	-10,934894	60
243 6819,0	-42,916264	-36,693863	-12,357109	60	243 6854,0	+52,230866	-28,969089	- 9,160323	60
243 6819,5	-37,770989	-41,491099	-13,898506	60	243 6854,5	+55,599438	-23,263119	- 7,263544	60
243 6820,0	-32,061421	-45,661483	-15,229793	60	243 6855,0	+58,252939	-17,250849	- 5,270769	60
243 6820,5	-25,873076	-49,143563	-16,331412	60	243 6855,5	+60,167784	-11,013274	- 3,208723	60
243 6821,0	-19,298846	-51,887375	-17,187628	60	243 6856,0	+61,330211	- 4,632117	- 1,104317	60
243 6821,5	-12,437163	-53,855151	-17,786755	60	243 6856,5	+61,735919	+1,811221	+1,015703	60
243 6822,0	- 5,390123	-55,021769	-18,121291	60	243 6857,0	+61,389795	+ 8,236562	+ 3,125057	60
243 6822,5	+ 1,738380	-55,374998	-18,187972	60	243 6857,5	+60,305520	+14,565840	+ 5,198197	60
243 6823,0	+ 8,844497	-54,915392	-17,987739	60	243 6858,0	+58,504904	+20,723873	+ 7,210584	60
243 6823,5	+15,826184	-53,655984	-17,525620	60	243 6858,5	+56,017454	+26,639061	+ 9,138893	60
243 6824,0	+22,584878	-51,621817	-16,810551	60	243 6859,0	+52,879660	+32,243991	+10,961211	60
243 6824,5	+29,027032	-48,849141	-15,855119	60	243 6859,5	+49,134405	+37,475943	+12,657206	60
243 6825,0	+35,065547	-45,384635	-14,675286	60	243 6860,0	+44,830202	+42,277276	+14,208245	60
243 6825,5	+40,620969	-41,284235	-13,289993	60	243 6860,5	+44,020628	+46,595793	+15,597505	60
243 6826,0	+45,622565	-36,611997	-11,720792	60	243 6861,0	+34,763598	+50,384932	+16,810045	60
243 6826,5	+50,009167	-31,438811	- 9,991398	60	243 6861,5	+29,120809	+53,603979	+17,832857	60
243 6827,0	+53,729783	-25,841001	- 8,127242	60	243 6862,0	+23,157130	+56,218168	+18,654903	60
243 6827,5	+56,743973	-19,898930	- 6,155001	60	243 6862,5	+16,940089	+58,198736	+19,267130	60
243 6828,0	+59,022040	-13,695614	- 4,102144	60	243 6863,0	+10,539412	+59,523023	+19,662496	60
243 6828,5	+60,544939	- 7,315341	- 1,996477	60	243 6863,5	+ 4,026576	+60,174475	+19,835978	60
243 6829,0	+61,304106	- 0,842410	+ 0,134267	60	243 6864,0	- 2,525571	+60,142712	+19,784574	60
243 6829,5	+61,300851	+ 5,640073	+ 2,262814	60	243 6864,5	- 9,043174	+59,423664	+19,507366	60
243 6830,0	+60,545958	+12,051195	+ 4,362678	60	243 6865,0	-15,451718	+58,019589	+19,005513	60
243 6830,5	+59,058931	+18,313168	+ 6,408466	60	243 6865,5	-21,676387	+55,939330	+18,282332	60
243 6831,0	+56,867235	+24,352027	+ 8,376096	60	243 6866,0	-27,642426	+53,198416	+17,343347	60
243 6831,5	+54,005524	+30,098242	+10,242991	60	243 6866,5	-33,275629	+49,819474	+16,196405	60
243 6832,0	+50,514898	+35,487157	+11,988227	60	243 6867,0	-38,502802	+45,832359	+14,851727	60
243 6832,5	+46,442151	+40,459339	+13,592626	60	243 6867,5	-43,252478	+41,274620	+13,322048	60
243 6833,0	+41,839018	+44,960750	+15,038826	60	243 6868,0	-47,455644	+36,191709	+11,622701	60
243 6833,5	+36,761627	+48,942939	+16,311321	60	243 6868,5	-51,046715	+30,637321	+ 9,771702	60
243 6834,0	+31,269874	+52,363112	+17,396492	60	243 6869,0	-53,964688	+24,673590	+ 7,789820	60
243 6834,5	+25,426953	+55,184145	+18,282600	60	243 6869,5	-56,154434	+18,371119	+ 5,700585	60
243 6835,0	+19,298949	+57,374681	+18,959817	60	243 6870,0	-57,568261	+11,808838	+ 3,530224	60
243 6835,5	+12,954484	+58,909189	+19,420242	60	243 6870,5	-58,167529	+ 5,073550	+1,307514	60
243 6836,0	+ 6,464376	+59,767986	+19,657910	60	243 6871,0	-57,924418	- 1,740873	- 0,936499	60

J.D.	x	y	z	J.D.	x	y	z
243 6871,5	-56,823664	-8,534696	-3,168903	243 6906,5	+30,491920	-46,411031	-15,379147
243 6872,0	-54,864153	-15,204027	-5,355492	243 6907,0	+36,600352	-42,796112	-14,165803
243 6872,5	-52,060180	-21,642915	-7,461460	243 6907,5	+42,162236	-38,550398	-12,744303
243 6873,0	-48,442400	-27,745913	-9,452247	243 6908,0	+47,109972	-33,749406	-11,139765
243 6873,5	-44,057970	-33,410841	-11,294458	243 6908,5	+51,388488	-28,473452	-9,378863
243 6874,0	-38,970278	-38,541789	-12,956847	243 6909,0	+54,954877	-22,805756	-7,489208
243 6874,5	-33,257645	-43,051921	-14,411231	243 6909,5	+57,777948	-16,830905	-5,498839
243 6875,0	-27,011561	-46,866125	-15,633361	243 6910,0	+59,837528	-10,633549	-3,435794
243 6875,5	-20,334171	-49,923098	-16,603586	243 6910,5	+61,123703	-4,297334	-1,327760
243 6876,0	-13,335414	-52,176871	-17,307344	243 6911,0	+61,636077	+2,095943	+0,798200
243 6876,5	-6,129907	-53,597691	-17,735439	243 6911,5	+61,382984	+8,466992	+2,915873
243 6877,0	+1,166172	-54,172079	-17,884031	243 6912,0	+60,380822	+14,739570	+5,000061
243 6877,5	+8,438605	-53,902453	-17,754509	243 6912,5	+58,653384	+20,840920	+7,026728
243 6878,0	+15,574736	-52,806037	-17,353115	243 6913,0	+56,231229	+26,702086	+8,973101
243 6878,5	+22,471626	-50,913512	-16,690484	243 6913,5	+53,151226	+32,258277	+10,817784
243 6879,0	+29,031782	-48,267464	-15,781121	243 6914,0	+49,455971	+37,449089	+12,540836
243 6879,5	+35,167390	-44,920547	-14,642812	243 6914,5	+45,193373	+42,218811	+14,123864
243 6880,0	+40,800507	-40,933759	-13,296023	243 6915,0	+40,416207	+46,516685	+15,550115
243 6880,5	+45,863639	-36,374870	-11,763410	243 6915,5	+35,181621	+50,297105	+16,804532
243 6881,0	+50,299786	-31,316725	-10,069243	243 6916,0	+29,550764	+53,519954	+17,873873
243 6881,5	+54,062549	-25,835983	-8,238990	243 6916,5	+23,588276	+56,150794	+18,746757
243 6882,0	+57,115867	-20,011766	-6,298889	243 6917,0	+17,361821	+58,161094	+19,413762
243 6882,5	+59,433724	-13,924585	-4,275578	243 6917,5	+10,941590	+59,528466	+19,867484
243 6883,0	+60,999861	-7,655372	-2,195789	243 6918,0	+4,399790	+60,236900	+20,102614
243 6883,5	+61,807241	-1,284583	-0,086060	243 6918,5	-2,189939	+60,276821	+20,115977
243 6884,0	+61,857689	+5,108536	+2,027519	243 6919,0	-8,753049	+59,645381	+19,906611
243 6884,5	+61,161474	+11,446657	+4,119518	243 6919,5	-15,214699	+58,346405	+19,475744
243 6885,0	+59,736717	+17,654967	+6,165368	243 6920,0	-21,500331	+56,390553	+18,826872
243 6885,5	+57,609087	+23,661776	+8,141562	243 6920,5	-27,536293	+53,795334	+17,965740
243 6886,0	+54,811155	+29,398998	+10,025796	243 6921,0	-33,250403	+50,585045	+16,900334
243 6886,5	+51,382015	+34,802666	+11,797153	243 6921,5	-38,572655	+46,790863	+15,640916
243 6887,0	+47,366669	+39,813335	+13,436229	243 6922,0	-43,435734	+42,450642	+14,199952
243 6887,5	+42,815507	+44,376470	+14,925249	243 6922,5	-47,775789	+37,608979	+12,592140
243 6888,0	+37,783801	+48,442822	+16,248194	243 6923,0	-51,533017	+32,317004	+10,834339
243 6888,5	+32,331091	+51,968684	+17,390884	243 6923,5	-54,652363	+26,632250	+8,945528
243 6889,0	+26,520638	+54,916160	+18,341061	243 6924,0	-57,084369	+20,618536	+6,946775
243 6889,5	+20,418841	+57,253351	+19,088456	243 6924,5	-58,785826	+14,345651	+4,861125
243 6890,0	+14,094704	+58,954539	+19,624828	243 6925,0	-59,720805	+7,889113	+2,713537
243 6890,5	+7,619270	+60,000284	+19,944019	243 6925,5	-59,861478	+1,329717	+0,530730
243 6891,0	+1,065097	+60,377495	+20,041963	243 6926,0	-59,189177	-5,247000	-1,659000
243 6891,5	-5,494259	+60,079521	+19,916710	243 6926,5	-57,695474	-11,751507	-3,825998
243 6892,0	-11,984707	+59,106187	+19,568445	243 6927,0	-55,383189	-18,091236	-5,939596
243 6892,5	-18,332120	+57,463865	+18,999507	243 6927,5	-52,267424	-24,171796	-7,968484
243 6893,0	-24,462767	+55,165439	+18,214370	243 6928,0	-48,376545	-29,898518	-9,881240
243 6893,5	-30,303826	+52,230521	+17,219726	243 6928,5	-43,752770	-35,178225	-11,646894
243 6894,0	-35,783812	+48,685372	+16,024462	243 6929,0	-38,452688	-39,921409	-13,235667
243 6894,5	-40,833135	+44,563110	+14,639705	243 6929,5	-32,547157	-44,044573	-14,619729
243 6895,0	-45,384650	+39,903778	+13,078876	243 6930,0	-26,120719	-47,472728	-15,774043
243 6895,5	-49,374316	+34,754468	+11,357700	243 6930,5	-19,270405	-50,141925	-16,677198
243 6896,0	-52,741955	+29,169456	+9,94276	243 6931,0	-12,103855	-52,001552	-17,312179
243 6896,5	-55,432059	+23,210231	+7,509068	243 6931,5	-4,736837	-53,016428	-17,667070
243 6897,0	-57,394917	+16,945556	+5,424930	243 6932,0	+2,709791	-53,168120	-17,735487
243 6897,5	-58,587659	+10,451306	+3,267055	243 6932,5	+10,113448	-52,455735	-17,516864
243 6898,0	-58,975614	+3,810200	+1,062876	243 6933,0	+17,353294	-50,895920	-17,016442
243 6898,5	-58,533723	-2,888733	-1,158099	243 6933,5	+24,313591	-48,521957	-16,244989
243 6899,0	-57,248029	-9,551001	-3,364585	243 6934,0	+30,886688	-45,382346	-15,218330
243 6899,5	-55,117179	-16,077811	-5,523896	243 6934,5	+36,975468	-41,538720	-13,956672
243 6900,0	-52,153793	-22,367698	-7,602491	243 6935,0	+42,495125	-37,063431	-12,483800
243 6900,5	-48,385700	-28,318552	-9,566642	243 6935,5	+47,374313	-32,037048	-10,826241
243 6901,0	-43,856595	-33,830031	-11,383236	243 6936,0	+51,555589	-26,545802	-9,012441
243 6901,5	-38,626329	-38,806303	-13,020695	243 6936,5	+54,995353	-20,679277	-7,071973
243 6902,0	-32,770484	-43,159011	-14,449940	243 6937,0	+57,663338	-14,528340	-5,034867
243 6902,5	-26,379099	-46,810135	-15,645342	243 6937,5	+59,541804	-8,183415	-2,931032
243 6903,0	-19,554750	-49,694720	-16,585625	243 6938,0	+60,624528	-1,733081	-0,789786
243 6903,5	-12,409871	-51,763115	-17,254601	243 6938,5	+60,915701	+4,736994	+1,360485
243 6904,0	-5,063540	-52,982493	-17,641656	243 6939,0	+60,428890	+11,144852	+3,492614
243 6904,5	+2,362004	-53,337729	-17,742048	243 6939,5	+59,185999	+17,412790	+5,580817
243 6905,0	+9,744906	-52,831308	-17,556851	243 6940,0	+57,216302	+23,467752	+7,600821
243 6905,5	+16,967033	-51,482615	-17,092736	243 6940,5	+54,555685	+29,241582	+9,529973
243 6906,0	+23,916872	-49,326400	-16,361427	243 6941,0	+51,245784	+34,671147	+11,347252

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z	J.D.	x	y	z		
243 6941,5	+47,333502	+39,698478	+13,033338	60	243 6976,5	-42,859877	+42,353646	+14,347496	60
243 6942,0	+42,870366	+44,270827	+14,570612	60	243 6977,0	-47,294514	+37,463921	+12,770649	60
243 6942,5	+37,912114	+48,340732	+15,943193	60	243 6977,5	-51,152121	+32,116274	+11,038426	60
243 6943,0	+32,518292	+51,866161	+17,136978	60	243 6978,0	-54,376308	+26,371777	+9,170498	60
243 6943,5	+26,751842	+54,810567	+18,139655	60	243 6978,5	-56,917203	+20,298185	+7,188770	60
243 6944,0	+20,678788	+57,143125	+18,940792	60	243 6979,0	-58,732474	+13,969323	+5,117205	60
243 6944,5	+14,367811	+58,838791	+19,531847	60	243 6979,5	-59,788303	+7,464352	+2,981580	60
243 6945,0	+7,889910	+59,878584	+19,906267	60	243 6980,0	-60,060242	+0,866868	+0,809205	60
243 6945,5	+1,317950	+60,249825	+20,059567	60	243 6980,5	-59,534034	+5,736147	+1,371413	60
243 6946,0	-5,273798	+59,946275	+19,989373	60	243 6981,0	-58,206212	-12,255494	+3,530963	60
243 6946,5	-11,810199	+58,968379	+19,695521	60	243 6981,5	-56,084563	-18,601019	+5,639724	60
243 6947,0	-18,215803	+57,323477	+19,180103	60	243 6982,0	-53,188493	-24,682982	+7,668024	60
243 6947,5	-24,415516	+55,025969	+18,447548	60	243 6982,5	-49,549045	-30,413437	+9,586690	60
243 6948,0	-30,335277	+52,097383	+17,504632	60	243 6983,0	-45,208916	-35,707728	+11,367532	60
243 6948,5	-35,902774	+48,566406	+16,360498	60	243 6983,5	-40,222089	-40,485890	+12,983814	60
243 6949,0	-41,048236	+44,468911	+15,026673	60	243 6984,0	-34,653425	-44,674163	+14,410760	60
243 6949,5	-45,705259	+39,847857	+13,517031	60	243 6984,5	-28,577897	-48,206377	+15,626002	60
243 6950,0	-49,811575	+34,753066	+11,847729	60	243 6985,0	-22,079693	-51,025333	+16,610037	60
243 6950,5	-53,309940	+29,240997	+10,037139	60	243 6985,5	-15,251053	-53,084104	+17,346686	60
243 6951,0	-56,148859	+23,374347	+8,105718	60	243 6986,0	-8,190901	-54,347175	+17,823460	60
243 6951,5	-58,283538	+17,221680	+6,075888	60	243 6986,5	-1,003200	-54,791489	+18,031921	60
243 6952,0	-59,676568	+10,856838	+3,971853	60	243 6987,0	+6,204869	-54,407153	+17,967935	60
243 6952,5	-60,298702	+4,358357	+1,819404	60	243 6987,5	+13,324914	-53,198024	+17,631875	60
243 6953,0	-60,129655	-2,191241	+0,354304	60	243 6988,0	+20,249506	-51,181887	+17,028698	60
243 6953,5	-59,158785	-8,706266	-2,521018	60	243 6988,5	+26,874375	-48,390208	+16,167884	60
243 6954,0	-57,385757	-15,098763	-4,651684	60	243 6989,0	+33,100674	-44,867719	+15,063311	60
243 6954,5	-54,821132	-21,279569	-6,716782	60	243 6989,5	+38,837008	-40,671304	+13,732924	60
243 6955,0	-51,486965	-27,159492	-8,686723	60	243 6990,0	+44,001386	-35,868768	+12,198324	60
243 6955,5	-47,417137	-32,650619	-10,532268	60	243 6990,5	+48,522795	-30,537160	+10,484247	60
243 6956,0	-42,657683	-37,667814	-12,225027	60	243 6991,0	+52,342406	-24,760882	+8,617940	60
243 6956,5	-37,266823	-42,130353	-13,737994	60	243 6991,5	+55,414330	-18,629639	+6,628506	60
243 6957,0	-31,314703	-45,963626	-15,046106	60	243 6992,0	+57,706042	-12,236395	+4,546226	60
243 6957,5	-24,882938	-49,101052	-16,126893	60	243 6992,5	+59,198180	-5,675313	+2,201885	60
243 6958,0	-18,063631	-51,485928	-16,961064	60	243 6993,0	+59,884225	+0,960073	+0,226169	60
243 6958,5	-10,958011	-53,073188	-17,533128	60	243 6993,5	+59,769583	+7,578513	+1,950890	60
243 6959,0	-3,674658	-53,831170	-17,831965	60	243 6994,0	+58,870748	+14,092442	+4,100371	60
243 6959,5	+3,672763	-53,742826	-17,851254	60	243 6994,5	+57,214025	+20,419029	+6,194836	60
243 6960,0	+10,968084	-52,806709	-17,589804	60	243 6995,0	+54,834420	+26,481028	+8,208611	60
243 6960,5	+18,095477	-51,037401	-17,051719	60	243 6995,5	+51,774468	+32,207363	+10,117978	60
243 6961,0	+24,942396	-48,465253	-16,246331	60	243 6996,0	+48,082982	+37,533402	+11,901292	60
243 6961,5	+31,402463	-45,135647	-15,187974	60	243 6996,5	+43,814166	+42,401200	+13,539051	60
243 6962,0	+37,378046	-41,107569	-13,895527	60	243 6997,0	+39,026580	+46,759471	+15,013914	60
243 6962,5	+42,782470	-36,451728	-12,391800	60	243 6997,5	+33,782425	+50,563588	+16,310687	60
243 6963,0	+47,541660	-31,248348	-10,702833	60	243 6998,0	+28,146832	+53,775414	+17,416286	60
243 6963,5	+51,595249	-25,584766	-8,857086	60	243 6998,5	+22,187333	+56,363207	+18,319709	60
243 6964,0	+54,896997	-19,552956	-6,884648	60	243 6999,0	+15,973404	+58,301511	+19,011993	60
243 6964,5	+57,414751	-13,247210	-4,816444	60	243 6999,5	+9,576088	+59,571071	+19,486202	60
243 6965,0	+59,129923	-6,762055	-2,683570	60	243 7000,0	+3,067664	+60,158715	+19,737384	60
243 6965,5	+60,036660	+0,190449	-0,516672	60	243 7000,5	-3,478622	+60,057532	+19,762637	60
243 6966,0	+60,140666	+6,377696	+1,654540	60	243 7001,0	-9,988872	+59,266743	+19,561059	60
243 6966,5	+59,458061	+12,856601	+3,801648	60	243 7001,5	-16,388822	+57,791982	+19,133849	60
243 6967,0	+58,014172	+19,165468	+5,897839	60	243 7002,0	-22,604229	+55,645457	+18,484363	60
243 6967,5	+55,842258	+25,229004	+7,918058	60	243 7002,5	-28,561271	+52,846093	+17,618167	60
243 6968,0	+52,982450	+30,977738	+9,839128	60	243 7003,0	-34,187105	+49,419862	+16,543145	60
243 6968,5	+49,480818	+36,348231	+11,639831	60	243 7003,5	-39,410460	+45,399939	+15,269558	60
243 6969,0	+45,388425	+41,283052	+13,300894	60	243 7004,0	-44,162431	+40,826991	+13,810140	60
243 6969,5	+40,760668	+45,730811	+14,805013	60	243 7004,5	-48,377357	+35,749249	+12,180143	60
243 6970,0	+35,656709	+49,646125	+16,136833	60	243 7005,0	-51,993799	+30,222548	+10,397349	60
243 6970,5	+30,138866	+52,989443	+17,282909	60	243 7005,5	-54,955722	+24,310229	+8,482049	60
243 6971,0	+24,272327	+55,727189	+18,231734	60	243 7006,0	-57,213611	+18,082815	+6,456958	60
243 6971,5	+18,124688	+57,831562	+18,973693	60	243 7006,5	-58,725802	+11,617515	+4,347048	60
243 6972,0	+11,765704	+59,280728	+19,501111	60	243 7007,0	-59,459635	+4,997470	+2,179322	60
243 6972,5	+5,266968	+60,058878	+19,808286	60	243 7007,5	-59,392687	-1,689250	+0,017511	60
243 6973,0	-1,298440	+60,156317	+19,891505	60	243 7008,0	-58,513752	-8,350901	+2,213427	60
243 6973,5	-7,856265	+59,569699	+19,749143	60	243 7008,5	-56,823698	-14,893515	+4,377568	60
243 6974,0	-14,331520	+58,302278	+19,381732	60	243 7009,0	-54,335985	-21,222549	+6,478775	60
243 6974,5	-20,648937	+56,364050	+18,792015	60	243 7009,5	-51,077065	-27,244681	+8,486166	60
243 6975,0	-26,733551	+53,772065	+17,985057	60	243 7010,0	-47,086182	-32,869623	+10,369739	60
243 6975,5	-32,511367	+50,550639	+16,968313	60	243 7010,5	-42,415027	-38,011935	+12,100971	60
243 6976,0	-37,910067	+46,731441	+15,751672	60	243 7011,0	-37,127027	-42,592801	+13,653407	60

J.D.	x	y	z	J.D.	x	y	z		
243 7011,5	-31,296280	-46,541607	-15,003184	60	243 7046,5	+58,154240	-14,025460	-5,189292	60
243 7012,0	-25,006290	-49,797407	-16,129534	60	243 7047,0	+59,752469	-7,609352	-3,085007	60
243 7012,5	-18,348417	-52,310051	-17,015154	60	243 7047,5	+60,565395	-1,087008	-0,937524	60
243 7013,0	-11,420240	-54,041177	-17,646556	60	243 7048,0	+60,593505	+5,455234	+1,224679	60
243 7013,5	-4,323762	-54,964896	-18,014300	60	243 7048,5	+59,847355	+11,932992	+3,373665	60
243 7014,0	+2,836433	-55,068187	-18,113161	60	243 7049,0	+58,347155	+18,264847	+5,482365	60
243 7014,5	+9,955058	-54,351062	-17,942165	60	243 7049,5	+56,121918	+24,373252	+7,524886	60
243 7015,0	+16,927975	-52,826475	-17,504616	60	243 7050,0	+53,208911	+30,185356	+9,476794	60
243 7015,5	+23,654011	-50,519983	-16,807965	60	243 7050,5	+49,652650	+35,633627	+11,315331	60
243 7016,0	+30,036688	-47,469161	-15,863672	60	243 7051,0	+45,504138	+40,656430	+13,019609	60
243 7016,5	+35,985847	-43,722802	-14,686917	60	243 7051,5	+40,819969	+45,198438	+14,570750	60
243 7017,0	+41,419092	-39,339883	-13,296307	60	243 7052,0	+35,661438	+49,210894	+15,951993	60
243 7017,5	+46,263142	-34,388405	-11,713498	60	243 7052,5	+30,093713	+52,651836	+17,148766	60
243 7018,0	+50,454883	-28,944009	-9,962741	60	243 7053,0	+24,185048	+55,486176	+18,148733	60
243 7018,5	+53,942240	-23,088474	-8,070409	60	243 7053,5	+18,006011	+57,685664	+18,941773	60
243 7019,0	+56,684748	-16,908149	-6,064484	60	243 7054,0	+11,628832	+59,228900	+19,520005	60
243 7019,5	+58,653909	-10,492325	-3,974028	60	243 7054,5	+5,126801	+60,101163	+19,877738	60
243 7020,0	+59,833212	-3,931613	-1,828642	60	243 7055,0	-1,426277	+60,294387	+20,011464	60
243 7020,5	+60,217876	+2,683634	+0,342038	60	243 7055,5	-7,956548	+59,806889	+19,919778	60
243 7021,0	+59,814447	+9,264738	+2,508832	60	243 7056,0	-14,390532	+58,643435	+19,603406	60
243 7021,5	+58,640043	+15,726035	+4,643434	60	243 7056,5	-20,655493	+56,815003	+19,065127	60
243 7022,0	+56,721562	+21,986003	+6,718815	60	243 7057,0	-26,679811	+54,338823	+18,309802	60
243 7022,5	+54,094654	+27,968164	+8,709516	60	243 7057,5	-32,393305	+51,238313	+17,344341	60
243 7023,0	+50,802723	+33,601837	+10,591905	60	243 7058,0	-37,727616	+47,543119	+16,177735	60
243 7023,5	+46,895843	+38,822636	+12,344361	60	243 7058,5	-42,616608	+43,289179	+14,821084	60
243 7024,0	+42,429757	+43,572850	+13,947389	60	243 7059,0	-46,996856	+38,518868	+13,287643	60
243 7024,5	+37,464896	+47,801631	+15,383705	60	243 7059,5	-50,808188	+33,281059	+11,592859	60
243 7025,0	+32,065441	+51,465025	+16,638260	60	243 7060,0	-53,994424	+27,631288	+9,754431	60
243 7025,5	+26,298565	+54,525958	+17,698219	60	243 7060,5	-56,504113	+21,631775	+7,792333	60
243 7026,0	+20,233748	+56,954181	+18,552974	60	243 7061,0	-58,291550	+15,351448	+5,728828	60
243 7026,5	+13,942155	+58,726091	+19,194075	60	243 7061,5	-59,317794	+8,865767	+3,588423	60
243 7027,0	+7,496126	+59,824542	+19,615185	60	243 7062,0	-59,552005	+2,256444	+1,397811	60
243 7027,5	+0,968796	+60,238862	+19,812083	60	243 7062,5	-58,972692	-4,389136	-0,814332	60
243 7028,0	-5,566302	+59,964639	+19,782598	60	243 7063,0	-57,569104	-10,978783	-3,017597	60
243 7028,5	-12,035545	+59,003735	+19,526623	60	243 7063,5	-55,342639	-17,416688	-5,180220	60
243 7029,0	-18,365526	+57,364228	+19,046085	60	243 7064,0	-52,307976	-23,604999	-7,269601	60
243 7029,5	-24,483345	+55,060530	+18,345008	60	243 7064,5	-48,494053	-29,445739	-9,252911	60
243 7030,0	-30,316993	+52,113522	+17,429547	60	243 7065,0	-43,944725	-34,843094	-11,097858	60
243 7030,5	-35,795693	+48,550626	+16,308018	60	243 7065,5	-38,718731	-39,705855	-12,773496	60
243 7031,0	-40,850462	+44,406104	+14,991007	60	243 7066,0	-32,889279	-43,950062	-14,251098	60
243 7031,5	-45,414635	+39,721187	+13,491422	60	243 7066,5	-26,542873	-47,501569	-15,505022	60
243 7032,0	-49,424642	+34,544319	+11,824568	60	243 7067,0	-19,777515	-50,298324	-16,513494	60
243 7032,5	-52,820844	+28,931264	+10,008200	60	243 7067,5	-12,700416	-52,292368	-17,259300	60
243 7033,0	-55,548583	+22,945180	+8,062560	60	243 7068,0	-5,425187	-53,451179	-17,730258	60
243 7033,5	-57,559280	+16,656476	+6,010336	60	243 7068,5	+1,931127	-53,758460	-17,919514	60
243 7034,0	-58,811775	+10,142558	+3,876603	60	243 7069,0	+9,251126	-53,214299	-17,825652	60
243 7034,5	-59,273645	+3,487262	+1,688634	60	243 7069,5	+16,419988	-51,834590	-17,452517	60
243 7035,0	-58,922632	-3,219961	-0,524339	60	243 7070,0	+23,328081	-49,650038	-16,808927	60
243 7035,5	-57,747899	-9,885223	-2,731507	60	243 7070,5	+29,873237	-46,704718	-15,908227	60
243 7036,0	-55,751243	-16,411650	-4,900946	60	243 7071,0	+35,962487	-43,054286	-14,767714	60
243 7036,5	-52,948035	-22,701184	-7,000215	60	243 7071,5	+41,513423	-38,764180	-13,408048	60
243 7037,0	-49,367747	-28,656631	-8,997005	60	243 7072,0	+46,454958	-33,907583	-11,852602	60
243 7037,5	-45,054158	-34,183893	-10,859882	60	243 7072,5	+50,727906	-28,563694	-10,126889	60
243 7038,0	-40,064948	-39,194235	-12,559045	60	243 7073,0	+54,284991	-22,815876	-8,257946	60
243 7038,5	-34,470890	-43,606558	-14,067060	60	243 7073,5	+57,090826	-16,750147	-6,273848	60
243 7039,0	-28,354520	-47,349478	-15,359589	60	243 7074,0	+59,121519	-10,453706	-4,203198	60
243 7039,5	-21,808318	-50,363031	-16,415940	60	243 7074,5	+60,364253	-4,013697	-2,074730	60
243 7040,0	-14,932682	-52,600181	-17,219605	60	243 7075,0	+60,816733	+2,483879	+0,083072	60
243 7040,5	-7,833547	-54,027640	-17,758546	60	243 7075,5	+60,866568	+8,955128	+2,242288	60
243 7041,0	-0,620032	-54,626505	-18,025431	60	243 7076,0	+59,390602	+15,319101	+4,375852	60
243 7041,5	+6,597986	-54,392203	-18,017633	60	243 7076,5	+57,554263	+21,498479	+6,457787	60
243 7042,0	+13,712122	-53,334244	-17,737183	60	243 7077,0	+55,010901	+27,420259	+8,463435	60
243 7042,5	+20,617555	-51,475428	-17,190524	60	243 7077,5	+51,801059	+33,016246	+10,369636	60
243 7043,0	+27,214876	-48,850998	-16,388256	60	243 7078,0	+47,971749	+38,223551	+12,154898	60
243 7043,5	+33,411652	-45,507446	-15,344746	60	243 7078,5	+43,575762	+42,984971	+13,799531	60
243 7044,0	+39,123709	-41,501198	-14,077729	60	243 7079,0	+38,670988	+47,249359	+15,285782	60
243 7044,5	+44,276141	-36,897246	-12,607852	60	243 7079,5	+33,319602	+50,971813	+16,597903	60
243 7045,0	+48,804132	-31,767767	-10,958229	60	243 7080,0	+27,587471	+54,113962	+17,722253	60
243 7045,5	+52,653476	-26,190670	-9,153977	60	243 7080,5	+21,543380	+56,644042	+18,647343	60
243 7046,0	+55,780898	-20,248173	-7,221751	60	243 7081,0	+15,258373	+58,536968	+19,363849	60

RECTANGULAR COORDINATES OF THE MOON 1952-1971

47

J.D.	x	y	z	J.D.	x	y	z		
243 7081,5	+ 8,805135	+59,774443	+19,864672	60	243 7116,5	-60,969914	+ 4,281299	+ 2,618595	60
243 7082,0	+ 2,257333	+60,344838	+20,144909	60	243 7117,0	-60,725451	- 2,178727	+ 0,454875	60
243 7082,5	- 4,310947	+60,243196	+20,201850	60	243 7117,5	-59,692405	- 8,608580	- 1,713973	60
243 7083,0	-10,825757	+59,471117	+20,034967	60	243 7118,0	-57,867365	-14,923513	- 3,859813	60
243 7083,5	-17,213803	+58,036707	+19,645882	60	243 7118,5	-55,257055	-21,036462	- 5,953534	60
243 7084,0	-23,402891	+55,954367	+19,038330	60	243 7119,0	-51,879271	-26,859043	- 7,965366	60
243 7084,5	-29,322430	+53,244784	+18,218137	60	243 7119,5	-47,763660	-32,302783	- 9,865275	60
243 7085,0	-34,903802	+49,934751	+17,193185	60	243 7120,0	-42,952392	-37,280589	-11,623429	60
243 7085,5	-40,080825	+46,057124	+15,973401	60	243 7120,5	-37,500724	-41,708580	-13,210811	60
243 7086,0	-44,790154	+41,650740	+14,570738	60	Epoch 1961,0				
243 7086,5	-48,971802	+36,760415	+12,999172	60	243 7112,0	-32,232903	+51,702459	+17,929142	61
243 7087,0	-52,569511	+31,436790	+11,274682	60	243 7112,5	-37,654306	+48,120121	+16,831971	61
243 7087,5	-55,531446	+25,736444	+ 9,415275	60	243 7113,0	-42,645139	+43,996788	+15,546441	61
243 7088,0	-57,810733	+19,721755	+ 7,440965	60	243 7113,5	-47,144438	+39,375160	+14,085618	61
243 7088,5	-59,366324	+13,460873	+ 5,373773	60	243 7114,0	-51,095200	+34,303657	+12,464540	61
243 7089,0	-60,163671	+ 7,027527	+ 3,237683	60	243 7114,5	-54,444889	+28,836215	+10,700163	61
243 7089,5	-60,175895	+ 0,500787	+ 1,058575	60	243 7115,0	-57,146013	+23,032117	+ 8,811309	61
243 7090,0	-59,384732	- 6,035358	- 1,135895	60	243 7115,5	-59,156703	+16,955746	+ 6,818602	61
243 7090,5	-57,781747	-12,492656	- 3,316493	60	243 7116,0	-60,441323	+10,676338	+ 4,744389	61
243 7091,0	-55,369482	-18,779464	- 5,452688	60	243 7116,5	-60,971123	+ 4,267672	+ 2,612671	61
243 7091,5	-52,162701	-24,801984	- 7,513017	60	243 7117,0	-60,725006	- 2,192300	+ 0,448975	61
243 7092,0	-48,189386	-30,465771	- 9,465599	60	243 7117,5	-59,690313	- 8,621922	- 1,719773	61
243 7092,5	-43,491638	-35,677700	-11,278766	60	243 7118,0	-57,863653	-14,936447	- 3,865436	61
243 7093,0	-38,126055	-40,348127	-12,921765	60	243 7118,5	-55,251773	-21,048812	- 5,958902	61
243 7093,5	-32,163817	-44,933442	-14,365619	60	243 7119,0	-51,872492	-26,870638	- 7,970406	61
243 7094,0	-25,690023	-47,738691	-15,584015	60	243 7119,5	-47,755481	-32,313457	- 9,869915	61
243 7094,5	-18,802390	-50,320119	-16,554160	60	243 7120,0	-42,942929	-37,290188	-11,627602	61
243 7095,0	-11,609311	-52,087673	-17,257655	60	243 7120,5	-37,490118	-41,716961	-13,214453	61
243 7095,5	- 4,227204	-53,006874	-17,681160	60	243 7121,0	-31,465543	-45,515118	-14,602919	61
243 7096,0	+ 3,222577	-53,060221	-17,816901	60	243 7121,5	-24,950652	-48,613458	-15,767672	61
243 7096,5	+10,617168	-52,247869	-17,662962	60	243 7122,0	-18,039097	-50,950601	-16,686410	61
243 7097,0	+17,835653	-50,587427	-17,223269	60	243 7122,5	-10,835328	-52,477318	-17,340655	61
243 7097,5	+24,762384	-48,113133	-16,507371	60	243 7123,0	- 3,452588	-53,158656	-17,716516	61
243 7098,0	+31,289860	-44,874265	-15,529950	60	243 7123,5	+ 3,989706	-52,975658	-17,805297	61
243 7098,5	+37,321097	-40,933120	-14,310196	60	243 7124,0	+11,369063	-51,926577	-17,603970	61
243 7099,0	+42,771348	-36,362661	-12,871050	60	243 7124,5	+18,563321	-50,027375	-17,115413	61
243 7099,5	+47,569208	-31,244093	-11,238401	60	243 7125,0	+25,454149	-47,311353	-16,348347	61
243 7100,0	+51,657085	-25,664404	- 9,440283	60	243 7125,5	+31,930376	-43,828115	-15,317069	61
243 7100,5	+54,991145	-19,714117	- 7,506133	60	243 7126,0	+37,890954	-39,641824	-14,040924	61
243 7101,0	+57,541027	-13,485350	- 5,466127	60	243 7126,5	+43,247251	-34,828809	-12,543551	61
243 7101,5	+59,288977	- 7,070035	- 3,350581	60	243 7127,0	+47,924802	-29,474994	-10,852073	61
243 7102,0	+60,229163	- 0,558548	- 1,189490	60	243 7127,5	+51,864183	-23,673075	- 8,996166	61
243 7102,5	+60,366574	+ 5,961444	+ 0,987888	60	243 7128,0	+55,021277	-17,519815	- 7,007163	61
243 7103,0	+59,716079	+12,405875	+ 3,153320	60	243 7128,5	+57,367026	-11,113583	- 4,917236	61
243 7103,5	+58,301495	+18,694970	+ 5,279860	60	243 7129,0	+58,886582	- 4,552142	- 2,758632	61
243 7104,0	+56,154614	+24,753762	+ 7,342031	60	243 7129,5	+59,578237	+ 2,069131	- 0,563067	61
243 7104,5	+53,314355	+30,512500	+ 9,315969	60	243 7130,0	+59,452188	+ 8,658657	+1,638777	61
243 7105,0	+49,825957	+35,906915	+11,179517	60	243 7130,5	+58,529164	+15,129715	+ 3,817614	61
243 7105,5	+45,740309	+40,878509	+12,912357	60	243 7131,0	+56,839136	+21,401190	+ 5,945849	61
243 7106,0	+41,113180	+45,374675	+14,496024	60	243 7131,5	+54,420041	+27,398045	+ 7,997745	61
243 7106,5	+36,004669	+49,348910	+15,914014	60	243 7132,0	+51,316664	+33,051629	+ 9,949560	61
243 7107,0	+30,478584	+52,760966	+17,151834	60	243 7132,5	+47,579610	+38,299792	+11,779582	61
243 7107,5	+24,601801	+55,576877	+18,197025	60	243 7133,0	+43,264478	+43,086981	+13,468204	61
243 7108,0	+18,443756	+57,769133	+19,039213	60	243 7133,5	+38,430968	+47,364125	+14,997883	61
243 7108,5	+12,075842	+59,316687	+19,670149	60	243 7134,0	+33,142364	+51,088730	+16,353182	61
243 7109,0	+ 5,570889	+60,205069	+20,083723	60	243 7134,5	+27,464857	+54,224735	+17,520742	61
243 7109,5	- 0,997418	+60,426395	+20,275997	60	243 7135,0	+21,467054	+56,742510	+18,489290	61
243 7110,0	- 7,555087	+59,979328	+20,245203	60	243 7135,5	+15,219502	+58,618826	+19,249636	61
243 7110,5	-14,028366	+58,869142	+19,991765	60	243 7136,0	+ 8,794211	+59,836886	+19,794683	61
243 7111,0	-20,344304	+57,107602	+19,518273	60	243 7136,5	+ 2,264227	+60,386271	+20,119435	61
243 7111,5	-26,431290	+54,712924	+18,829478	60	243 7137,0	- 4,296846	+60,262994	+20,221010	61
243 7112,0	-32,219604	+51,709661	+17,932273	60	243 7137,5	-10,815302	+59,469547	+20,098676	61
243 7112,5	-37,641914	+48,128536	+16,835629	60	243 7138,0	-17,217837	+58,014906	+19,753855	61
243 7113,0	-42,633793	+44,006319	+15,550584	60	243 7138,5	-23,432058	+55,914475	+19,190115	61
243 7113,5	-47,134268	+39,385696	+14,090199	60	243 7139,0	-29,387037	+53,190165	+18,413212	61
243 7114,0	-51,086320	+34,315076	+12,469504	60	243 7139,5	-35,013878	+49,870283	+17,431065	61
243 7114,5	-54,437402	+28,848383	+10,705453	60	243 7140,0	-40,246308	+45,989456	+16,253736	61
243 7115,0	-57,140007	+23,044889	+ 8,816861	60	243 7140,5	-45,021331	+41,588529	+14,893424	61
243 7115,5	-59,152249	+16,968967	+ 6,824349	60	243 7141,0	-49,279793	+36,714302	+13,364380	61
243 7116,0	-60,438474	+10,689847	+ 4,750262	60					

J.D.	x	y	z	J.D.	x	y	z		
243 7141,5	-52,967003	+31,419337	+11,682855	61	243 7176,5	-20,673475	-51,893597	-16,690015	61
243 7142,0	-56,033417	+25,761674	+ 9,867032	61	243 7177,0	-13,782905	-53,629431	-17,431988	61
243 7142,5	-58,435271	+19,804492	+ 7,936922	61	243 7177,5	- 6,685535	-54,567561	-17,914743	61
243 7143,0	-60,135091	+13,615663	+ 5,914235	61	243 7178,0	+ 0,515461	-54,684853	-18,128130	61
243 7143,5	-61,102485	+ 7,267349	+ 3,822249	61	243 7178,5	+ 7,712805	-53,971159	-18,066205	61
243 7144,0	-61,314586	+ 0,835452	+ 1,685653	61	243 7179,0	+14,797073	-52,430140	-17,727538	61
243 7144,5	-60,756748	- 5,600971	- 0,469637	61	243 7179,5	+21,658860	-50,079753	-17,115434	61
243 7145,0	-59,423114	-11,960360	- 2,616687	61	243 7180,0	+28,191197	-46,952438	-16,238048	61
243 7145,5	-57,317161	-18,159410	- 4,727768	61	243 7180,5	+34,291997	-43,094784	-15,108337	61
243 7146,0	-54,452276	-24,113920	- 6,774639	61	243 7181,0	+39,866493	-38,566728	-13,743855	61
243 7146,5	-50,852269	-29,739783	- 8,728856	61	243 7181,5	+44,829537	-33,440324	-12,166400	61
243 7147,0	-46,551768	-34,954077	-10,562114	61	243 7182,0	+49,107654	-27,798051	-10,401497	61
243 7147,5	-41,596666	-39,676386	-12,246692	61	243 7182,5	+52,640580	-21,730724	- 8,477756	61
243 7148,0	-36,044210	-43,830204	-13,755905	61	243 7183,0	+55,382423	-15,335161	- 6,426122	61
243 7148,5	-29,963021	-47,344538	-15,064640	61	243 7183,5	+57,302221	- 8,711784	- 4,279094	61
243 7149,0	-23,432812	-50,155641	-16,149930	61	243 7184,0	+58,383946	- 1,962157	- 2,069908	61
243 7149,5	-16,543717	-52,208859	-16,991592	61	243 7184,5	+58,626060	+ 4,813266	+ 0,168212	61
243 7150,0	- 9,395243	-53,460427	-17,572833	61	243 7185,0	+58,040642	+11,517178	+ 2,402753	61
243 7150,5	- 2,094760	-53,879311	-17,880909	61	243 7185,5	+56,652029	+18,057109	+ 4,602508	61
243 7151,0	+ 5,244496	-53,448732	-17,907672	61	243 7186,0	+54,495539	+24,346776	+ 6,738044	61
243 7151,5	+12,505864	-52,167375	-17,650025	61	243 7186,5	+51,615846	+30,307051	+ 8,782085	61
243 7152,0	+19,572067	-50,502015	-17,110258	61	243 7187,0	+48,065429	+35,866575	+10,709724	61
243 7152,5	+26,328239	-47,128581	-16,296147	61	243 7187,5	+43,903132	+40,962113	+12,498590	61
243 7153,0	+32,665082	-43,449778	-15,220894	61	243 7188,0	+39,192831	+45,538657	+14,128923	61
243 7153,5	+38,481769	-39,075820	-13,902768	61	243 7188,5	+34,002200	+49,549313	+15,583543	61
243 7154,0	+43,688642	-34,081715	-12,364615	61	243 7189,0	+28,401745	+52,955155	+16,847841	61
243 7154,5	+48,209298	-28,553167	-10,633125	61	243 7189,5	+22,463892	+55,724864	+17,909677	61
243 7155,0	+51,982042	-22,583929	- 8,738000	61	243 7190,0	+16,262329	+57,834447	+18,759313	61
243 7155,5	+54,960769	-16,273103	- 6,711068	61	243 7190,5	+ 9,871448	+59,267031	+19,389335	61
243 7156,0	+57,115065	- 9,722405	- 4,585386	61	243 7191,0	+ 3,365835	+60,012408	+19,794539	61
243 7156,5	+58,429762	- 3,033631	- 2,394386	61	243 7191,5	- 3,180067	+60,066935	+19,971900	61
243 7157,0	+58,904069	+ 3,693530	- 0,171130	61	243 7192,0	- 9,692303	+59,433333	+19,920498	61
243 7157,5	+58,550221	+10,363321	+ 2,052325	61	243 7192,5	-16,097713	+58,120540	+19,641504	61
243 7158,0	+57,392118	+16,885316	+ 4,245435	61	243 7193,0	-22,324232	+56,143654	+19,138147	61
243 7158,5	+55,463711	+23,175451	+ 6,379529	61	243 7193,5	-28,301207	+53,523921	+18,415725	61
243 7159,0	+52,807567	+29,156690	+ 8,428077	61	243 7194,0	-33,959812	+50,288778	+17,481638	61
243 7159,5	+49,473361	+34,759383	+10,366834	61	243 7194,5	-39,233447	+46,471857	+16,345383	61
243 7160,0	+45,516625	+39,921421	+12,173922	61	243 7195,0	-44,058245	+42,113016	+15,018592	61
243 7160,5	+40,997607	+44,588207	+13,829851	61	243 7195,5	-48,373698	+37,258394	+13,515062	61
243 7161,0	+35,980329	+48,712529	+15,317486	61	243 7196,0	-52,123315	+31,960360	+11,850742	61
243 7161,5	+30,531807	+52,254434	+16,622038	61	243 7196,5	-55,255380	+26,277376	+10,043732	61
243 7162,0	+24,721271	+55,180885	+17,730942	61	243 7197,0	-57,723769	+20,273816	+ 8,114218	61
243 7162,5	+18,619726	+57,465722	+18,633892	61	243 7197,5	-59,488852	+14,019619	+ 6,084400	61
243 7163,0	+12,299404	+59,089336	+19,322706	61	243 7198,0	-60,518456	+ 7,589804	+ 3,978343	61
243 7163,5	+ 5,833375	+60,038637	+19,791350	61	243 7198,5	-60,788612	+ 1,063803	+ 1,821782	61
243 7164,0	- 0,704815	+60,306944	+20,035892	61	243 7199,0	-60,284618	- 5,475348	- 0,358127	61
243 7164,5	- 7,241517	+59,893820	+20,054475	61	243 7199,5	-59,001624	-11,942018	- 2,533120	61
243 7165,0	-13,703359	+58,805271	+19,847364	61	243 7200,0	-56,945326	-18,249133	- 4,674198	61
243 7165,5	-20,017614	+57,053544	+19,416919	61	243 7200,5	-54,132490	-24,309474	- 6,752034	61
243 7166,0	-26,112667	+54,657270	+18,767631	61	243 7201,0	-50,591137	-30,037083	- 8,737440	61
243 7166,5	-31,918471	+51,641479	+17,906144	61	243 7201,5	-46,360561	-35,348703	-10,601841	61
243 7167,0	-37,367111	+48,037593	+16,841267	61	243 7202,0	-41,491199	-40,165316	-12,317791	61
243 7167,5	-42,393357	+43,883392	+15,583978	61	243 7202,5	-36,044125	-44,413608	-13,859475	61
243 7168,0	-46,935352	+39,222991	+14,147418	61	243 7203,0	-30,090342	-48,027365	-15,203176	61
243 7168,5	-50,935283	+34,106684	+12,546879	61	243 7203,5	-23,709888	-50,948846	-16,327761	61
243 7169,0	-54,340137	+28,590735	+10,799732	61	243 7204,0	-16,990698	-53,129953	-17,215105	61
243 7169,5	-57,102410	+22,737048	+ 8,925353	61	243 7204,5	-10,027274	-54,533329	-17,850473	61
243 7170,0	-59,180959	+16,612830	+ 6,945015	61	243 7205,0	- 2,919210	-55,133216	-18,222851	61
243 7170,5	-60,541661	+10,289996	+ 4,881726	61	243 7205,5	+ 4,230437	-54,916092	-18,325198	61
243 7171,0	-61,158203	+ 3,844616	+ 2,760040	61	243 7206,0	+11,316884	-53,881214	-18,154663	61
243 7171,5	-61,012692	- 2,643857	+ 0,605848	61	243 7206,5	+18,235430	-52,040811	-17,712702	61
243 7172,0	-60,096330	- 9,093373	+1,553899	61	243 7207,0	+24,883347	-49,420052	-17,005114	61
243 7172,5	-58,409908	-15,420253	- 3,691470	61	243 7207,5	+31,161785	-46,056826	-16,042009	61
243 7173,0	-55,964185	-21,540157	- 5,778685	61	243 7208,0	+36,977605	-42,001103	-14,837650	61
243 7173,5	-52,780231	-27,369183	- 7,787263	61	243 7208,5	+42,245239	-37,314174	-13,410241	61
243 7174,0	-48,889657	-32,825024	- 9,689197	61	243 7209,0	+46,888286	-32,067457	-11,781579	61
243 7174,5	-44,334599	-37,828154	-11,457141	61	243 7209,5	+50,841085	-26,341177	- 9,976645	61
243 7175,0	-39,167724	-42,303140	-13,064863	61	243 7210,0	+54,049814	-20,222662	- 8,023080	61
243 7175,5	-33,451917	-46,179919	-14,487651	61	243 7210,5	+56,473526	-13,804603	- 5,950628	61
243 7176,0	-27,259881	-49,395167	-15,702795	61	243 7211,0	+58,084649	- 7,183102	- 3,790491	61

J.D.	x	y	z	J.D.	x	y	z
243 7211.5	+58,869201	- 0,455684	- 1,574688	243 7246.5	- 7,445107	+59,511196	+20,216351
243 7212.0	+58,826569	+ 6,280619	+ 0,664587	243 7247.0	-13,935346	+58,501148	+20,051566
243 7212.5	+57,969070	+12,931116	+ 2,895597	243 7247.5	-20,260460	+56,825993	+19,659287
243 7213.0	+56,321012	+19,405099	+ 5,087623	243 7248.0	-26,349445	+54,506026	+19,044329
243 7213.5	+53,917593	+25,617233	+ 7,211449	243 7248.5	-32,133743	+51,567333	+18,213502
243 7214.0	+50,803734	+31,488740	+ 9,239802	243 7249.0	-37,547592	+48,041727	+17,175610
243 7214.5	+47,032542	+36,948185	+11,147622	243 7249.5	-42,528247	+43,966485	+15,941362
243 7215.0	+42,664059	+41,932125	+12,912334	243 7250.0	-47,016292	+39,384294	+14,523382
243 7215.5	+37,763796	+46,385373	+14,513960	243 7250.5	-50,956025	+34,343241	+12,936195
243 7216.0	+32,401464	+50,261109	+15,935196	243 7251.0	-54,295794	+28,896713	+11,196220
243 7216.5	+26,649846	+53,520845	+17,161416	243 7251.5	-56,988608	+23,103453	+ 9,321810
243 7217.0	+20,583747	+56,134198	+18,180630	243 7252.0	-58,992598	+17,027446	+ 7,333222
243 7217.5	+14,279119	+58,078579	+18,983413	243 7252.5	-60,271870	+10,737888	+ 5,252627
243 7218.0	+ 7,812347	+59,338902	+19,562804	243 7253.0	-60,797207	+ 4,308959	+ 3,104072
243 7218.5	+ 1,259637	+59,907176	+19,914204	243 7253.5	-60,547068	- 2,180485	+ 0,913393
243 7219.0	- 5,303449	+59,782252	+20,035301	243 7254.0	-59,508603	- 8,647396	- 1,291911
243 7219.5	-11,802394	+58,969442	+19,925956	243 7254.5	-57,678687	-15,005271	- 3,482897
243 7220.0	-18,164054	+57,480347	+19,588147	243 7255.0	-55,065024	-21,165136	- 5,629475
243 7220.5	-24,316932	+55,332610	+19,025903	243 7255.5	-51,687060	-27,036805	- 7,700804
243 7221.0	-30,191454	+52,549818	+18,245280	243 7256.0	-47,576832	-32,530460	- 9,665793
243 7221.5	-35,720290	+49,161481	+17,254349	243 7256.5	-42,779516	-37,558503	-11,493719
243 7222.0	-40,838627	+45,202922	+16,063196	243 7257.0	-37,353543	-42,037621	-13,154903
243 7222.5	-45,484577	+40,715344	+14,683929	243 7257.5	-31,370356	-45,891028	-14,621483
243 7223.0	-49,599651	+35,745858	+13,130710	243 7258.0	-24,913535	-49,050676	-15,868175
243 7223.5	-53,129285	+30,347493	+11,419779	243 7258.5	-18,077472	-51,459377	-16,873038
243 7224.0	-56,023563	+24,579221	+ 9,569478	243 7259.0	-10,965496	-53,072736	-17,618153
243 7224.5	-58,237941	+18,505834	+ 7,600223	243 7259.5	- 3,687523	-53,860564	-18,090193
243 7225.0	-59,734049	+12,197744	+ 5,534470	243 7260.0	+ 3,642571	-53,807830	-18,280801
243 7225.5	-60,480856	+ 5,730713	+ 3,396654	243 7260.5	+10,909733	-52,915147	-18,186843
243 7226.0	-60,455458	- 0,814735	+ 1,213008	243 7261.0	+18,000547	-51,198557	-17,810417
243 7226.5	-59,644246	- 7,353983	- 0,988627	243 7261.5	+24,805851	-48,688831	-17,158685
243 7227.0	-58,043859	-13,799316	- 3,179101	243 7262.0	+31,223120	-45,430379	-16,243593
243 7227.5	-55,662119	-20,061118	- 5,328340	243 7262.5	+37,158425	-41,479710	-15,081387
243 7228.0	-52,518641	-26,049289	- 7,405803	243 7263.0	+42,528029	-36,903735	-13,692113
243 7228.5	-48,645401	-31,674914	- 9,381007	243 7263.5	+47,259542	-31,777915	-12,099019
243 7229.0	-44,086882	-36,852052	-11,224147	243 7264.0	+51,292613	-26,184349	-10,327929
243 7229.5	-38,899841	-41,499621	-12,906697	243 7264.5	+54,579402	-20,210004	- 8,406676
243 7230.0	-33,152755	-45,543295	-14,402096	243 7265.0	+57,084594	-13,944924	- 6,364487
243 7230.5	-26,924795	-48,917256	-15,686324	243 7265.5	+58,785240	- 7,480676	- 4,231479
243 7231.0	-20,304553	-51,565888	-16,738519	243 7266.0	+59,670493	- 0,908881	- 2,038127
243 7231.5	-13,388305	-53,445050	-17,541445	243 7266.5	+59,740989	+ 5,680104	+ 0,185163
243 7232.0	- 6,278180	-54,523232	-18,081926	243 7267.0	+59,008334	+12,198338	+ 2,408483
243 7232.5	+ 0,919948	-54,782165	-18,351093	243 7267.5	+57,494336	+18,561341	+ 4,602777
243 7233.0	+ 8,098563	-54,217207	-18,344584	243 7268.0	+55,230232	+24,688987	+ 6,740166
243 7233.5	+15,150641	-52,837332	-18,062594	243 7268.5	+52,255914	+30,506296	+ 8,794245
243 7234.0	+21,971676	-50,664763	-17,509793	243 7269.0	+48,619052	+35,944110	+10,740326
243 7234.5	+28,461626	-47,734408	-16,695208	243 7269.5	+44,374206	+40,939676	+12,555656
243 7235.0	+34,526600	-44,092882	-15,631932	243 7270.0	+39,581878	+45,437060	+14,219604
243 7235.5	+40,080461	-39,797559	-14,336849	243 7270.5	+34,307632	+49,387563	+15,713795
243 7236.0	+45,046056	-34,915196	-12,830212	243 7271.0	+28,621148	+52,749946	+17,022247
243 7236.5	+49,356411	-29,520695	-11,135265	243 7271.5	+22,595284	+55,490588	+18,131429
243 7237.0	+52,955486	-23,695564	- 9,277740	243 7272.0	+16,305205	+57,583579	+19,030326
243 7237.5	+55,798922	-17,526471	- 7,285405	243 7272.5	+ 9,827482	+59,010577	+19,710415
243 7238.0	+57,854378	-11,103658	- 5,187544	243 7273.0	+ 3,239318	+59,760837	+20,165708
243 7238.5	+59,101731	- 4,519399	- 3,014439	243 7273.5	- 3,382224	+59,830856	+20,392642
243 7239.0	+59,533068	+ 2,133536	- 0,796873	243 7274.0	- 9,960900	+59,224313	+20,390092
243 7239.5	+59,152390	+ 8,763360	+ 1,434388	243 7274.5	-16,421897	+57,951650	+20,159242
243 7240.0	+57,975168	+15,280680	+ 3,649066	243 7275.0	-22,692385	+56,029804	+19,703512
243 7240.5	+56,027693	+21,599794	+ 5,817819	243 7275.5	-28,701983	+53,481961	+19,028497
243 7241.0	+53,346226	+27,639867	+ 7,912671	243 7276.0	-34,383164	+50,337107	+18,141824
243 7241.5	+49,976018	+33,325903	+ 9,907345	243 7276.5	-39,671653	+46,629887	+17,053117
243 7242.0	+45,970251	+38,589599	+11,777581	243 7277.0	-44,506750	+42,400280	+15,773900
243 7242.5	+41,388891	+43,369961	+13,501381	243 7277.5	-48,831609	+37,693320	+14,317518
243 7243.0	+36,297528	+47,613780	+15,059183	243 7278.0	-52,593600	+32,558989	+12,699108
243 7243.5	+30,766156	+51,275845	+16,433981	243 7278.5	-55,744628	+27,051987	+10,935538
243 7244.0	+24,868131	+54,319104	+17,611392	243 7279.0	-58,241529	+21,231638	+ 9,045396
243 7244.5	+18,679074	+56,714565	+18,579663	243 7279.5	-60,046476	+15,161709	+ 7,048924
243 7245.0	+12,275950	+58,441204	+19,329659	243 7280.0	-61,127491	+ 8,910298	+ 4,968019
243 7245.5	+ 5,736211	+59,485666	+19,854792	243 7280.5	-61,459112	+ 2,549648	+ 2,826187
243 7246.0	- 0,862926	+59,841975	+20,150939	243 7281.0	-61,023032	- 3,844109	+ 0,648474

J.D.	x	y	z	J.D.	x	y	z		
243 7281,5	-59,808864	-10,191303	-1,538615	61	243 7316,5	+26,323950	-46,427691	-16,692729	61
243 7282,0	-57,815146	-16,409239	-3,707267	61	243 7317,0	+32,682576	-42,651433	-15,654303	61
243 7282,5	-55,050139	-22,412896	-5,828553	61	243 7317,5	+38,504539	-38,177510	-14,360523	61
243 7283,0	-51,532855	-28,115872	-7,872726	61	243 7318,0	+43,697396	-33,084015	-12,834287	61
243 7283,5	-47,293961	-33,431601	-9,809592	61	243 7318,5	+48,182975	-27,460195	-11,102780	61
243 7284,0	-42,376485	-38,274863	-11,608994	61	243 7319,0	+51,898868	-21,403458	-9,196531	61
243 7284,5	-36,836444	-42,563636	-13,241426	61	243 7319,5	+54,799200	-15,016390	-7,148413	61
243 7285,0	-30,742932	-46,221156	-14,678712	61	243 7320,0	+56,854661	-8,403823	-4,992673	61
243 7285,5	-24,177876	-49,178239	-15,894798	61	243 7320,5	+58,051899	-1,670191	-2,764019	61
243 7286,0	-17,235186	-51,375672	-16,866603	61	243 7321,0	+58,392385	+5,082746	-0,496791	61
243 7286,5	-10,019231	-52,766474	-17,574823	61	243 7321,5	+57,891077	+11,757711	+1,775670	61
243 7287,0	-2,642751	-53,317983	-18,004693	61	243 7322,0	+56,574766	+18,263288	+4,021563	61
243 7287,5	+4,775826	-53,013445	-18,146640	61	243 7322,5	+54,480524	+24,514907	+6,211017	61
243 7288,0	+12,115511	-51,853108	-17,996728	61	243 7323,0	+51,654070	+30,435441	+8,316353	61
243 7288,5	+19,256071	-49,854374	-17,556837	61	243 7323,5	+48,148394	+35,955596	+10,312246	61
243 7289,0	+26,081422	-47,051510	-16,834675	61	243 7324,0	+44,022353	+41,013987	+12,175832	61
243 7289,5	+32,482716	-43,494374	-15,843444	61	243 7324,5	+39,339607	+45,557164	+13,886732	61
243 7290,0	+38,361078	-39,246678	-14,601355	61	243 7325,0	+34,167548	+49,539472	+15,427045	61
243 7290,5	+43,629703	-34,383749	-13,130934	61	243 7325,5	+28,576489	+52,922891	+16,781343	61
243 7291,0	+48,215401	-28,990101	-11,458260	61	243 7326,0	+22,638916	+55,676875	+17,936624	61
243 7291,5	+52,059351	-23,156811	-9,612100	61	243 7326,5	+16,428823	+57,778110	+18,882263	61
243 7292,0	+55,117511	-16,979134	-7,623121	61	243 7327,0	+10,021149	+59,210386	+19,609984	61
243 7292,5	+57,360273	-10,554169	-5,523094	61	243 7327,5	+3,491258	+59,964434	+20,113837	61
243 7293,0	+58,771882	-3,978882	-3,344197	61	243 7328,0	-3,085576	+60,037736	+20,390134	61
243 7293,5	+59,349593	+2,651571	-1,118438	61	243 7328,5	-9,634650	+59,434472	+20,437463	61
243 7294,0	+59,102611	+9,245232	+1,122858	61	243 7329,0	-16,082296	+58,165280	+20,256616	61
243 7294,5	+58,050988	+15,714444	+3,349450	61	243 7329,5	-22,356392	+56,247207	+19,850596	61
243 7295,0	+56,224463	+21,976687	+5,532503	61	243 7330,0	-28,386858	+53,703574	+19,224593	61
243 7295,5	+53,661417	+27,955225	+7,644841	61	243 7330,5	-34,106128	+50,563709	+18,85909	61
243 7296,0	+50,407751	+33,579551	+9,661143	61	243 7331,0	-39,449701	+46,862875	+17,343948	61
243 7296,5	+46,515964	+38,785770	+11,558074	61	243 7331,5	-44,356620	+42,641964	+16,110148	61
243 7297,0	+42,044190	+43,516785	+13,314409	61	243 7332,0	-48,770027	+37,947274	+14,697912	61
243 7297,5	+37,055400	+47,722536	+14,911121	61	243 7332,5	-52,637627	+32,830187	+13,122521	61
243 7298,0	+31,616517	+51,360028	+16,331428	61	243 7333,0	-55,912207	+27,346829	+11,401050	61
243 7298,5	+25,797741	+54,393497	+17,560864	61	243 7333,5	-58,552090	+21,557692	+9,552240	61
243 7299,0	+19,671763	+56,794359	+18,587294	61	243 7334,0	-60,521606	+15,527224	+7,596403	61
243 7299,5	+13,313117	+58,541302	+19,400964	61	243 7334,5	-61,791561	+9,323388	+5,555271	61
243 7300,0	+6,797452	+59,620186	+19,994493	61	243 7335,0	-62,339537	+3,017163	+3,451850	61
243 7300,5	+0,200887	+60,023996	+20,362877	61	243 7335,5	-62,150438	-3,317945	+1,310279	61
243 7301,0	-6,400638	+59,752721	+20,503475	61	243 7336,0	-61,216792	-9,606446	-0,844344	61
243 7301,5	-12,931977	+58,813221	+20,415969	61	243 7336,5	-59,539117	-15,771461	-2,986151	61
243 7302,0	-19,319395	+57,219063	+20,102355	61	243 7337,0	-57,126283	-21,735320	-5,088681	61
243 7302,5	-25,491126	+54,990238	+19,566855	61	243 7337,5	-53,995936	-27,420269	-7,125115	61
243 7303,0	-31,377930	+52,153000	+18,815879	61	243 7338,0	-50,174783	-32,749237	-9,068495	61
243 7303,5	-36,913580	+48,739519	+17,857932	61	243 7338,5	-45,698930	-37,646677	-10,892027	61
243 7304,0	-42,035334	+44,787593	+16,703519	61	243 7339,0	-40,614134	-42,039532	-12,569371	61
243 7304,5	-46,684422	+40,340409	+15,365110	61	243 7339,5	-34,976085	-45,858406	-14,075030	61
243 7305,0	-50,806354	+35,446119	+13,856980	61	243 7340,0	-28,850378	-49,038724	-15,384748	61
243 7305,5	-54,351419	+30,157631	+12,195176	61	243 7340,5	-22,312524	-51,522233	-16,476001	61
243 7306,0	-57,274956	+24,532223	+10,397391	61	243 7341,0	-15,447530	-53,258423	-17,328506	61
243 7306,5	-59,537813	+18,631305	+8,482911	61	243 7341,5	-8,349329	-54,206261	-17,924813	61
243 7307,0	-61,106667	+12,520066	+6,472489	61	243 7342,0	-1,119726	-54,335818	-18,250898	61
243 7307,5	-61,954427	+6,267200	+4,388292	61	243 7342,5	+6,133035	-53,629899	-18,296772	61
243 7308,0	-62,060690	+0,055420	+2,253783	61	243 7343,0	+13,296194	-52,085536	-18,057048	61
243 7308,5	-61,412271	-6,373090	+0,093653	61	243 7343,5	+20,254854	-49,715077	-17,531397	61
243 7309,0	-60,003582	-12,608674	-2,066323	61	243 7344,0	+26,894754	-46,546980	-16,724936	61
243 7309,5	-57,837436	-18,683094	-4,199409	61	243 7344,5	+33,105328	-42,625879	-15,648368	61
243 7310,0	-54,925516	-24,515916	-6,278085	61	243 7345,0	+38,782843	-38,012028	-14,317903	61
243 7310,5	-51,289132	-30,026097	-8,274269	61	243 7345,5	+43,833521	-32,780109	-12,755007	61
243 7311,0	-46,959884	-35,132920	-10,159612	61	243 7346,0	+48,176241	-27,017244	-10,985811	61
243 7311,5	-41,980256	-39,757127	-11,905859	61	243 7346,5	+51,744705	-20,820468	-9,040364	61
243 7312,0	-36,404145	-43,822291	-13,485279	61	243 7347,0	+54,489047	-14,293915	-6,951748	61
243 7312,5	-30,297198	-47,256470	-14,871222	61	243 7347,5	+56,376517	-7,545685	-4,755037	61
243 7313,0	-23,736836	-49,994080	-16,038739	61	243 7348,0	+57,391471	-0,684838	-2,486307	61
243 7313,5	-16,811873	-51,977922	-16,965285	61	243 7348,5	+57,534683	+6,181403	-0,181643	61
243 7314,0	-9,621675	-53,161406	-17,631494	61	243 7349,0	+56,822077	+12,950051	+2,123696	61
243 7314,5	-2,274687	-53,510602	-18,021927	61	243 7349,5	+55,283152	+19,524311	+4,395998	61
243 7315,0	+5,113585	-53,006241	-18,125829	61	243 7350,0	+52,959002	+25,814982	+6,603659	61
243 7315,5	+12,423233	-51,645290	-17,937741	61	243 7350,5	+49,900533	+31,741468	+8,717586	61
243 7316,0	+19,533039	-49,441876	-17,457948	61	243 7351,0	+46,166485	+37,232261	+10,711429	61

RECTANGULAR COORDINATES OF THE MOON 1952-1971

51

J.D.	x	y	z	J.D.	x	y	z		
243 7351,5	+41,821784	+42,225165	+12,561730	61	243 7386,5	-47,980252	+38,515174	+14,888339	61
243 7352,0	+36,936007	+46,667260	+14,247967	61	243 7387,0	-51,899690	+33,447004	+13,330030	61
243 7352,5	+31,582025	+50,514589	+15,752502	61	243 7387,5	-55,228433	+27,990385	+11,616857	61
243 7353,0	+25,834933	+53,731839	+17,060516	61	243 7388,0	-57,923578	+22,205720	+9,767496	61
243 7353,5	+19,771160	+56,291952	+18,159910	61	243 7388,5	-59,948031	+16,157938	+7,802398	61
243 7354,0	+13,467702	+58,175642	+19,041173	61	243 7389,0	-61,270980	+9,916099	+5,743657	61
243 7354,5	+7,001550	+59,371063	+19,697302	61	243 7389,5	-61,868706	+3,553010	+3,614938	61
243 7355,0	+0,449188	+59,873376	+20,123662	61	243 7390,0	-61,725090	+2,855366	+1,441271	61
243 7355,5	-6,113810	+59,684465	+20,317915	61	243 7390,5	-60,832327	+9,230563	+0,751116	61
243 7356,0	-12,613155	+58,812719	+20,279967	61	243 7391,0	-59,191511	-15,492433	-2,935077	61
243 7356,5	-18,976170	+57,272693	+20,011851	61	243 7391,5	-56,813045	-21,560057	-5,082812	61
243 7357,0	-25,132164	+55,085099	+19,517746	61	243 7392,0	-53,717098	-27,352814	-7,166227	61
243 7357,5	-31,012749	+52,276474	+18,803890	61	243 7392,5	-49,933820	-32,791518	-9,157314	61
243 7358,0	-36,552272	+48,879217	+17,878583	61	243 7393,0	-45,503354	-37,799612	-11,028528	61
243 7358,5	-41,688213	+44,931355	+16,752152	61	243 7393,5	-40,475779	-42,304453	-12,753260	61
243 7359,0	-46,361649	+40,476415	+15,436915	61	243 7394,0	-34,910740	-46,238563	-14,306251	61
243 7359,5	-50,517763	+35,563269	+13,947140	61	243 7394,5	-28,876984	-49,540906	-15,664048	61
243 7360,0	-54,106339	+30,245872	+12,298995	61	243 7395,0	-22,451571	-52,158044	-16,805437	61
243 7360,5	-57,082406	+24,583042	+10,510495	61	243 7395,5	-15,719037	-54,045322	-17,711871	61
243 7361,0	-59,406706	+18,638051	+8,601377	61	243 7396,0	-8,770254	-55,167784	-18,367832	61
243 7361,5	-61,046299	+12,478228	+6,592982	61	243 7396,5	-1,701234	-55,501207	-18,761222	61
243 7362,0	-61,975183	+6,174476	+4,508144	61	243 7397,0	+5,388299	-55,032692	-18,883630	61
243 7362,5	-62,174681	-0,199335	+2,370980	61	243 7397,5	+12,396419	-53,761390	-18,730634	61
243 7363,0	-61,634098	-6,567002	+0,206701	61	243 7398,0	+19,220648	-51,698758	-18,301962	61
243 7363,5	-60,351001	-12,850719	-1,958602	61	243 7398,5	+25,759681	-48,868836	-17,601647	61
243 7364,0	-58,331651	-18,971873	-4,098232	61	243 7399,0	+31,915230	-45,308188	-16,638103	61
243 7364,5	-55,591290	-24,851900	-6,185146	61	243 7399,5	+37,593869	-41,065572	-15,424055	61
243 7365,0	-52,154333	-30,413185	-8,192250	61	243 7400,0	+42,708868	-36,201356	-13,976454	61
243 7365,5	-48,054447	-35,580001	-10,092721	61	243 7400,5	+47,182055	-30,786677	-12,316241	61
243 7366,0	-43,334634	-40,279513	-11,860344	61	243 7401,0	+50,945452	-24,902221	-10,468012	61
243 7366,5	-38,047105	-44,442822	-13,469849	61	243 7401,5	+53,942865	-18,636799	-8,459603	61
243 7367,0	-32,253106	-48,005999	-14,897293	61	243 7402,0	+56,131062	-12,085555	-6,321524	61
243 7367,5	-26,022588	-50,911232	-16,120436	61	243 7402,5	+57,480739	-5,348040	-4,086350	61
243 7368,0	-19,433771	-53,107951	-17,119151	61	243 7403,0	+57,977105	+1,473898	-1,788026	61
243 7368,5	-12,572478	-54,553979	-17,875834	61	243 7403,5	+57,619965	+8,278297	+0,538861	61
243 7369,0	-5,531335	-55,216731	-18,375839	61	243 7404,0	+56,423407	+14,965228	+2,859838	61
243 7369,5	+1,591298	-55,074280	-18,607882	61	243 7404,5	+54,415061	+21,438789	+5,141233	61
243 7370,0	+8,692630	-54,116505	-18,564483	61	243 7405,0	+51,635080	+27,608936	+7,350852	61
243 7370,5	+15,667016	-52,345974	-18,242312	61	243 7405,5	+48,134670	+33,392976	+9,458544	61
243 7371,0	+22,407816	-49,778723	-17,642542	61	243 7406,0	+43,974487	+38,716734	+11,436646	61
243 7371,5	+28,809489	-46,444719	-16,771085	61	243 7406,5	+39,222987	+43,515422	+13,260370	61
243 7372,0	+34,769936	-42,388012	-15,638726	61	243 7407,0	+33,954596	+47,734045	+14,907996	61
243 7372,5	+40,192950	-37,666398	-14,261114	61	243 7407,5	+28,248128	+51,327639	+16,361023	61
243 7373,0	+44,990724	-32,350668	-12,658617	61	243 7408,0	+22,185217	+54,261174	+17,604202	61
243 7373,5	+49,086177	-26,523232	-10,855939	61	243 7408,5	+15,848907	+56,509191	+18,625468	61
243 7374,0	+52,415096	-20,276374	-8,881617	61	243 7409,0	+9,322509	+58,055398	+19,415851	61
243 7374,5	+54,927800	-13,709994	-6,767341	61	243 7409,5	+2,688612	+58,892153	+19,969348	61
243 7375,0	+56,590326	-6,929092	-4,547142	61	243 7410,0	-3,971733	+59,019774	+20,282705	61
243 7375,5	+57,385031	-0,041052	-2,256500	61	243 7410,5	-10,579602	+58,446061	+20,355300	61
243 7376,0	+57,310402	+6,847067	+0,068570	61	243 7411,0	-17,058701	+57,185638	+20,188930	61
243 7376,5	+56,380503	+13,631067	+2,392400	61	243 7411,5	-23,335713	+55,259524	+19,787689	61
243 7377,0	+54,623763	+20,211874	+4,680471	61	243 7412,0	-29,340584	+52,694646	+19,157801	61
243 7377,5	+52,081342	+26,497382	+6,900104	61	243 7412,5	-35,006735	+49,523443	+18,307516	61
243 7378,0	+48,805396	+32,403879	+9,021012	61	243 7413,0	-40,271307	+45,783667	+17,247038	61
243 7378,5	+44,857070	+37,856969	+11,015685	61	243 7413,5	-45,075288	+41,518006	+15,988408	61
243 7379,0	+40,304657	+42,792160	+12,859663	61	243 7414,0	-49,363828	+36,774008	+14,545502	61
243 7379,5	+35,221719	+47,154987	+14,531646	61	243 7414,5	-53,086464	+31,603888	+12,933961	61
243 7380,0	+29,685523	+50,900924	+16,013544	61	243 7415,0	-56,197485	+26,064401	+11,171183	61
243 7380,5	+23,775599	+53,995073	+17,290412	61	243 7415,5	-58,656355	+20,216711	+9,276281	61
243 7381,0	+17,572551	+56,411668	+18,350334	61	243 7416,0	-60,428144	+14,126206	+7,270050	61
243 7381,5	+11,157100	+58,133548	+19,184290	61	243 7416,5	-61,484190	+7,862301	+5,174927	61
243 7382,0	+4,609320	+59,151609	+19,786004	61	243 7417,0	-61,802641	+1,498091	+3,014890	61
243 7382,5	-1,991971	+59,464225	+20,151760	61	243 7417,5	-61,369226	-4,890051	+0,815366	61
243 7383,0	-8,569654	+59,076786	+20,280279	61	243 7418,0	-60,177888	-11,223072	+1,396955	61
243 7383,5	-15,048702	+58,001279	+20,172593	61	243 7418,5	-58,231582	-17,419936	+3,594318	61
243 7384,0	-21,356441	+56,255834	+19,831894	61	243 7419,0	-55,542859	-23,398562	+5,748200	61
243 7384,5	-27,422830	+53,864488	+19,263475	61	243 7419,5	-52,134517	-29,076894	+7,829643	61
243 7385,0	-33,180695	+50,856939	+18,474655	61	243 7420,0	-48,039935	-34,374156	+9,809677	61
243 7385,5	-38,566000	+47,268354	+17,474727	61	243 7420,5	-43,303389	-39,212286	+11,659790	61
243 7386,0	-43,518132	+43,139203	+16,274908	61	243 7421,0	-37,979896	-43,517401	+13,352431	61

J.D.	x	y	z	J.D.	x	y	z		
243 7421,5	-32,135030	-47,221454	-14,861593	61	243 7456,5	+56,717736	-11,924331	-6,731834	61
243 7422,0	-25,844161	-50,263702	-16,163335	61	243 7457,0	+58,168934	-5,324557	-4,520815	61
243 7422,5	-19,191590	-52,592277	-17,236375	61	243 7457,5	+58,778069	+1,354049	-2,243597	61
243 7423,0	-12,269263	-54,165571	-18,062595	61	243 7458,0	+58,547303	+8,016233	+0,066968	61
243 7423,5	-5,175217	-54,953264	-18,627475	61	243 7458,5	+57,491034	+14,569393	+2,378366	61
243 7424,0	+1,988138	-54,937317	-18,920497	61	243 7459,0	+55,635028	+20,924867	+4,658909	61
243 7424,5	+9,115927	-54,112532	-18,935421	61	243 7459,5	+53,015597	+26,999060	+6,878158	61
243 7425,0	+16,102797	-52,486813	-18,670463	61	243 7460,0	+49,678606	+32,714416	+9,007306	61
243 7425,5	+22,844920	-50,081167	-18,128368	61	243 7460,5	+45,678439	+38,000274	+11,019513	61
243 7426,0	+29,241958	-46,929317	-17,316380	61	243 7461,0	+41,076831	+42,793472	+12,890170	61
243 7426,5	+35,198937	-43,077120	-16,246113	61	243 7461,5	+35,941793	+47,038940	+14,597149	61
243 7427,0	+40,627982	-38,581681	-14,933321	61	243 7462,0	+30,346403	+50,690010	+16,120974	61
243 7427,5	+45,449809	-33,510201	-13,397589	61	243 7462,5	+24,367686	+53,708716	+17,444972	61
243 7428,0	+49,595186	-27,938799	-11,661966	61	243 7463,0	+18,085453	+56,065845	+18,555335	61
243 7428,5	+53,005930	-21,950971	-9,752501	61	243 7463,5	+11,581200	+57,740909	+19,441181	61
243 7429,0	+55,635926	-15,636119	-7,697782	61	243 7464,0	+4,937080	+58,721971	+20,094521	61
243 7429,5	+57,451647	-9,087857	-5,528377	61	243 7464,5	-1,765069	+59,005444	+20,510251	61
243 7430,0	+58,432665	-2,402358	-3,276293	61	243 7465,0	-8,444602	+58,595679	+20,686041	61
243 7430,5	+58,571662	+4,323387	-0,974379	61	243 7465,5	-15,022856	+57,504574	+20,622247	61
243 7431,0	+57,874385	+10,993249	+1,344242	61	243 7466,0	-21,423836	+55,751143	+20,321792	61
243 7431,5	+56,359198	+17,513610	+3,646755	61	243 7466,5	-27,574760	+53,360925	+19,789983	61
243 7432,0	+54,056413	+23,794883	+5,901211	61	243 7467,0	-33,406613	+50,365626	+19,034431	61
243 7432,5	+51,007472	+29,752944	+8,077042	61	243 7467,5	-38,854476	+46,802518	+18,064843	61
243 7433,0	+47,263773	+35,310331	+10,145518	61	243 7468,0	-43,857883	+42,714004	+16,892893	61
243 7433,5	+42,885505	+40,397280	+12,080165	61	243 7468,5	-48,361099	+38,147221	+15,532109	61
243 7434,0	+37,940237	+44,952526	+13,857086	61	243 7469,0	-52,313315	+33,153603	+13,997729	61
243 7434,5	+32,501495	+48,923833	+15,455210	61	243 7469,5	-55,668894	+27,788562	+12,306602	61
243 7435,0	+26,647327	+52,268323	+16,856468	61	243 7470,0	-58,387541	+22,111177	+10,477093	61
243 7435,5	+20,458946	+54,952626	+18,045894	61	243 7470,5	-60,434566	+16,183930	+8,529006	61
243 7436,0	+14,019344	+56,952681	+19,011631	61	243 7471,0	-61,781099	+10,072432	+6,483501	61
243 7436,5	+7,412122	+58,253524	+19,744901	61	243 7471,5	-62,404420	+3,845215	+4,363043	61
243 7437,0	+0,720436	+58,848921	+20,239913	61	243 7472,0	-62,288331	-2,426526	+2,191323	61
243 7437,5	-5,973939	+58,740844	+20,493758	61	243 7472,5	-61,423582	-8,669217	+0,006800	61
243 7438,0	-12,591374	+57,938907	+20,506210	61	243 7473,0	-59,808447	-14,807264	-2,205410	61
243 7438,5	-19,054994	+56,459877	+20,279614	61	243 7473,5	-57,449182	-20,763480	-4,377640	61
243 7439,0	-25,291185	+54,327076	+19,818704	61	243 7474,0	-54,360762	-26,459677	-6,495854	61
243 7439,5	-31,229948	+51,569820	+19,130402	61	243 7474,5	-50,567546	-31,817431	-8,531868	61
243 7440,0	-36,805258	+48,223078	+18,223750	61	243 7475,0	-46,103799	-36,758965	-10,457216	61
243 7440,5	-41,955254	+44,326935	+17,109721	61	243 7475,5	-41,014363	-41,208350	-12,243558	61
243 7441,0	-46,622405	+39,926246	+15,801103	61	243 7476,0	-35,355061	-45,092909	-13,863122	61
243 7441,5	-50,753814	+35,070441	+14,312456	61	243 7476,5	-29,192850	-48,344779	-15,289233	61
243 7442,0	-54,301299	+29,813170	+12,660004	61	243 7477,0	-22,605738	-50,902764	-16,496966	61
243 7442,5	-57,221726	+24,212183	+10,861590	61	243 7477,5	-15,682285	-52,714296	-17,463838	61
243 7443,0	-59,477238	+18,329118	+8,936634	61	243 7478,0	-8,520256	-53,737293	-18,170513	61
243 7443,5	-61,035634	+12,229341	+6,906089	61	243 7478,5	-1,226539	-53,942135	-18,601539	61
243 7444,0	-61,870827	+5,981772	+4,792407	61	243 7479,0	+6,087640	-53,313243	-18,746004	61
243 7444,5	-61,963324	-0,341359	+2,619476	61	243 7479,5	+13,306494	-51,850323	-18,598086	61
243 7445,0	-61,300873	-6,664827	+0,412548	61	243 7480,0	+20,313868	-49,569072	-18,157439	61
243 7445,5	-59,879113	-12,910828	-1,801884	61	243 7480,5	+26,996040	-46,501289	-17,429382	61
243 7446,0	-57,702213	-18,999554	-3,996233	61	243 7481,0	+33,244749	-42,694295	-16,424849	61
243 7446,5	-54,783772	-24,849945	-6,142053	61	243 7481,5	+38,960076	-38,209775	-15,160134	61
243 7447,0	-51,147342	-30,380606	-8,210329	61	243 7482,0	+44,052924	-33,121984	-13,656403	61
243 7447,5	-46,827160	-35,511008	-10,171842	61	243 7482,5	+48,447074	-27,515636	-11,939054	61
243 7448,0	-41,868546	-40,162837	-11,997618	61	243 7483,0	+52,080490	-21,483397	-10,036928	61
243 7448,5	-36,328184	-44,261611	-13,659482	61	243 7483,5	+54,906231	-15,123418	-7,981509	61
243 7449,0	-30,273979	-47,738381	-15,130641	61	243 7484,0	+56,892640	-8,536811	-5,806054	61
243 7449,5	-23,784642	-50,531591	-16,386336	61	243 7484,5	+58,023073	-1,825346	-3,544789	61
243 7450,0	-16,948813	-52,588898	-17,404519	61	243 7485,0	+58,295296	+4,910615	-1,232176	61
243 7450,5	-9,863754	-53,868903	-18,166511	61	243 7485,5	+57,720426	+11,573877	+1,097754	61
243 7451,0	-2,633618	-54,342700	-18,657598	61					
243 7451,5	+4,632662	-53,995035	-18,867542	61					
243 7452,0	+11,823743	-52,825095	-18,790954	61					
243 7452,5	+18,828415	-50,846825	-18,427523	61					
243 7453,0	+25,538184	-48,088748	-17,782073	61					
243 7453,5	+31,849714	-44,593273	-16,864427	61					
243 7454,0	+37,667106	-40,415620	-15,689162	61					
243 7454,5	+42,903797	-35,622366	-14,275187	61					
243 7455,0	+47,484201	-30,289784	-12,645238	61					
243 7455,5	+51,344828	-24,501948	-10,825301	61					
243 7456,0	+54,435089	-18,348816	-8,843974	61					

Epoch 1962.0

243 7477,0	-22,592758	-50,907815	-16,499161	62
243 7477,5	-15,668805	-52,717800	-17,465361	62
243 7478,0	-8,506749	-53,739196	-18,171340	62
243 7478,5	-1,212675	-53,942408	-18,601657	62
243 7479,0	+6,101378	-53,311880	-18,745411	62
243 7479,5	+13,319890	-51,847438	-18,596792	62
243 7480,0	+20,326711	-49,564530	-18,155465	62
243 7480,5	+27,008127	-46,495254	-17,426758	62
243 7481,0	+33,255886	-42,686863	-16,421618	62

RECTANGULAR COORDINATES OF THE MOON 1952-1971

53

J.D.	x	y	z	J.D.	x	y	z		
243 7481,5	+38,970088	-38,201066	-15,156348	62	243 7516,5	+30,026989	+50,928890	+15,956573	62
243 7482,0	+44,061653	-33,112137	-13,652122	62	243 7517,0	+24,131606	+53,970752	+17,314009	62
243 7482,5	+48,454382	-27,504807	-11,934346	62	243 7517,5	+17,931416	+56,343096	+18,457076	62
243 7483,0	+52,086265	-21,471756	-10,031867	62	243 7518,0	+11,506521	+58,028478	+19,375583	62
243 7483,5	+54,910385	-15,111146	-7,976173	62	243 7518,5	+4,937003	+59,017361	+20,062048	62
243 7484,0	+56,895110	-8,524095	-5,800526	62	243 7519,0	-1,697687	+59,307882	+20,511661	62
243 7484,5	+58,023824	-1,812377	-3,539151	62	243 7519,5	-8,319360	+58,905424	+20,722175	62
243 7485,0	+58,294316	+4,923644	-1,226512	62	243 7520,0	-14,851620	+57,822422	+20,693845	62
243 7485,5	+57,717731	+11,586778	+1,103362	62	243 7520,5	-21,220366	+56,077883	+20,429320	62
243 7486,0	+56,317527	+18,084470	+3,417428	62	243 7521,0	-27,354302	+53,697222	+19,933585	62
243 7486,5	+54,128153	+24,329972	+5,684089	62	243 7521,5	-33,185397	+50,711830	+19,213863	62
243 7487,0	+51,193763	+30,243211	+7,873570	62	243 7522,0	-38,649310	+47,158753	+18,279502	62
243 7487,5	+47,566926	+35,751467	+9,958207	62	243 7522,5	-43,685876	+43,080396	+17,141914	62
243 7488,0	+43,307394	+40,789835	+11,912663	62	243 7523,0	-48,239455	+38,524074	+15,814442	62
243 7488,5	+38,480925	+45,301560	+13,714109	62	243 7523,5	-52,259344	+33,541659	+14,312249	62
243 7489,0	+33,158085	+49,238128	+15,342306	62	243 7524,0	-55,700183	+28,189187	+12,652213	62
243 7489,5	+27,413318	+52,559475	+16,779726	62	243 7524,5	-58,522245	+22,526413	+10,852780	62
243 7490,0	+21,323846	+55,233844	+18,011565	62	243 7525,0	-60,691745	+16,616341	+8,933829	62
243 7490,5	+14,968814	+57,237824	+19,025781	62	243 7525,5	-62,181165	+10,524820	+6,916547	62
243 7491,0	+8,428393	+58,556181	+19,813097	62	243 7526,0	-62,969425	+4,320058	+4,823265	62
243 7491,5	+1,782932	+59,181646	+20,366957	62	243 7526,5	-63,042225	-1,927839	+2,677340	62
243 7492,0	-4,887787	+59,114717	+20,683511	62	243 7527,0	-62,392232	-8,147318	+0,502983	62
243 7492,5	-11,505284	+58,363352	+20,761531	62	243 7527,5	-61,019283	-14,265884	-1,674889	62
243 7493,0	-17,993080	+56,942640	+20,602333	62	243 7528,0	-58,930647	-20,210590	-3,830802	62
243 7493,5	-24,277286	+54,874467	+20,209708	62	243 7528,5	-56,141238	-25,908571	-5,938909	62
243 7494,0	-30,287191	+52,187062	+19,589780	62	243 7529,0	-52,673865	-31,287624	-7,973178	62
243 7494,5	-35,955785	+48,914685	+18,750939	62	243 7529,5	-48,559429	-36,276813	-9,907576	62
243 7495,0	-41,220185	+45,097077	+17,703654	62	243 7530,0	-43,837180	-40,807187	-11,716314	62
243 7495,5	-46,022056	+40,779087	+16,460387	62	243 7530,5	-38,554895	-44,812543	-13,374095	62
243 7496,0	-50,307964	+36,010217	+15,035437	62	243 7531,0	-32,769089	-48,230386	-14,856428	62
243 7496,5	-54,029657	+30,844178	+13,444819	62	243 7531,5	-26,545073	-51,002920	-16,139975	62
243 7497,0	-57,144334	+25,338468	+11,706116	62	243 7532,0	-19,956936	-53,078253	-17,202960	62
243 7497,5	-59,614904	+19,553996	+9,838377	62	243 7532,5	-13,087331	-54,411718	-18,025641	62
243 7498,0	-61,410158	+13,554673	+7,861980	62	243 7533,0	-6,027010	-54,967293	-18,590807	62
243 7498,5	-62,505079	+7,407094	+5,798543	62	243 7533,5	+1,125947	-54,719137	-18,884369	62
243 7499,0	-62,880985	+1,180152	+3,670799	62	243 7534,0	+8,267279	-53,653147	-18,895945	62
243 7499,5	-62,525912	+5,055275	+1,502508	62	243 7534,5	+15,288152	-51,768360	-18,619427	62
243 7500,0	-61,434780	-11,226705	+0,681672	62	243 7535,0	+22,077182	-49,078237	-18,053535	62
243 7500,5	-59,609841	-17,260426	+2,856267	62	243 7535,5	+28,522948	-45,611599	-17,202271	62
243 7501,0	-57,061025	-23,081925	+4,995152	62	243 7536,0	+34,516811	-41,412994	-16,075193	62
243 7501,5	-53,806373	-28,616426	+7,071674	62	243 7536,5	+39,956041	-36,542568	-14,687542	62
243 7502,0	-49,872462	-33,789461	+9,058858	62	243 7537,0	+44,746930	-31,075137	-13,060085	62
243 7502,5	-45,294968	-38,527679	+10,929631	62	243 7537,5	+48,807751	-25,098602	-11,218728	62
243 7503,0	-40,119072	-42,759752	+12,657119	62	243 7538,0	+52,071361	-18,711683	-9,193871	62
243 7503,5	-34,399823	-46,417452	+14,215008	62	243 7538,5	+54,487060	-12,021098	-7,019546	62
243 7504,0	-28,202442	-49,436998	+15,577968	62	243 7539,0	+56,021904	-5,138473	-4,732407	62
243 7504,5	-21,602365	-51,760552	+16,722195	62	243 7539,5	+56,660996	+1,822925	-2,370633	62
243 7505,0	-14,685013	-53,337918	+17,625981	62	243 7540,0	+56,407113	+8,751287	+0,027157	62
243 7505,5	-7,545191	-54,128354	+18,270380	62	243 7540,5	+55,279595	+15,539056	+2,422924	62
243 7506,0	-0,286023	-54,102491	+18,639932	62	243 7541,0	+53,312762	+22,085282	+4,780105	62
243 7506,5	+6,982636	-53,244032	+18,723305	62	243 7541,5	+50,553862	+28,297410	+7,064337	62
243 7507,0	+14,146308	-51,551419	+18,514010	62	243 7542,0	+47,060974	+34,092555	+9,244004	62
243 7507,5	+21,088516	-49,038929	+18,010895	62	243 7542,5	+42,900798	+39,398248	+11,290620	62
243 7508,0	+27,693802	-45,737375	+17,218545	62	243 7543,0	+38,146619	+44,152737	+13,179029	62
243 7508,5	+33,850976	+4,1694015	+16,147431	62	243 7543,5	+32,876419	+48,304975	+14,887514	62
243 7509,0	+39,456396	-36,971791	+14,813813	62	243 7544,0	+27,171240	+51,814275	+16,397753	62
243 7509,5	+44,417114	-31,647885	+13,239400	62	243 7544,5	+21,113841	+54,649905	+17,694767	62
243 7510,0	+48,653434	-25,811447	+11,450717	62	243 7545,0	+14,787524	+56,790507	+18,766759	62
243 7510,5	+52,100993	-19,561008	+9,478313	62	243 7545,5	+8,275230	+58,223513	+19,604991	62
243 7511,0	+54,712063	-13,001507	+7,355803	62	243 7546,0	+1,658781	+58,944542	+20,203581	62
243 7511,5	+56,456084	-6,241244	+5,118860	62	243 7546,5	-4,981697	+58,956858	+20,559383	62
243 7512,0	+57,319418	+0,611053	+2,804178	62	243 7547,0	-11,568282	+58,270874	+20,671818	62
243 7512,5	+57,304658	+7,448820	+0,448559	62	243 7547,5	-18,025632	+56,903635	+20,542731	62
243 7513,0	+56,429271	+14,169929	+1,911943	62	243 7548,0	-24,281369	+54,878477	+20,176293	62
243 7513,5	+54,724022	+20,678446	+4,242719	62	243 7548,5	-30,266392	+52,224651	+19,578885	62
243 7514,0	+52,231248	+26,885978	+6,511143	62	243 7549,0	-35,915196	+48,976940	+18,758986	62
243 7514,5	+49,003075	+32,712567	+8,686987	62	243 7549,5	-41,166215	+45,175460	+17,727125	62
243 7515,0	+45,099633	+38,087249	+10,742695	62	243 7550,0	-45,962122	+40,865244	+16,495755	62
243 7515,5	+40,587507	+42,948307	+12,653559	62	243 7550,5	-50,250221	+36,096037	+15,079192	62
243 7516,0	+35,538220	+47,243292	+14,397794	62	243 7551,0	-53,982802	+30,921945	+13,493538	62

I.D.	x	y	z	I.D.	x	y	z		
243 7551,5	-57,117450	+25,401056	+11,756542	62	243 7586,5	-20,265234	-53,811043	-17,693875	62
243 7552,0	-59,617499	+19,595138	+9,887529	62	243 7587,0	-13,537830	-55,301237	-18,572886	62
243 7552,5	-61,452388	+13,569185	+7,907275	62	243 7587,5	-6,633882	-56,043326	-19,200870	62
243 7553,0	-62,597970	+7,390966	+5,837851	62	243 7588,0	+0,355356	-56,016361	-19,565550	62
243 7553,5	-63,036931	+1,130534	+3,702486	62	243 7588,5	+7,334906	-55,209632	-19,658002	62
243 7554,0	-62,759038	-5,140318	+1,525388	62	243 7589,0	+14,207291	-53,623277	-19,472940	62
243 7554,5	-61,761415	-11,348630	-0,668437	62	243 7589,5	+20,873894	-51,268842	-19,008990	62
243 7555,0	-60,048840	-17,420907	-2,853379	62	243 7590,0	+27,236454	-48,169696	-18,268925	62
243 7555,5	-57,633868	-23,283754	-5,003447	62	243 7590,5	+33,198726	-44,361220	-17,259805	62
243 7556,0	-54,536999	-28,864549	-7,092482	62	243 7591,0	+38,668258	-39,890872	-15,993116	62
243 7556,5	-50,786861	-34,092216	-9,094426	62	243 7591,5	+43,558257	-34,817894	-14,484752	62
243 7557,0	-46,420119	-38,897887	-10,983548	62	243 7592,0	+47,789552	-29,212806	-12,754975	62
243 7557,5	-41,481591	-43,215770	-12,734732	62	243 7592,5	+51,292511	-23,156474	-10,828164	62
243 7558,0	-36,024090	-46,983869	-14,323755	62	243 7593,0	+54,008888	-16,738859	-8,732509	62
243 7558,5	-30,108388	-50,144954	-15,727606	62	243 7593,5	+55,893489	-10,057389	-6,499514	62
243 7559,0	-23,802927	-52,647402	-16,924793	62	243 7594,0	+56,915595	-3,215002	-4,163404	62
243 7559,5	-17,183536	-54,446159	-17,895700	62	243 7594,5	+57,059837	+3,682155	-1,760371	62
243 7560,0	-10,332984	-55,503745	-18,622955	62	243 7595,0	+56,326796	+10,527136	+0,672244	62
243 7560,5	-3,340404	-55,791413	-19,091860	62	243 7595,5	+54,732874	+17,214728	+3,096824	62
243 7561,0	+3,699532	-55,290098	-19,290758	62	243 7596,0	+52,309763	+23,643901	+5,476379	62
243 7561,5	+10,687634	-53,991602	-19,211513	62	243 7596,5	+49,103315	+29,720068	+7,775381	62
243 7562,0	+17,521518	-51,899573	-18,849912	62	243 7597,0	+45,171938	+35,357000	+9,960529	62
243 7562,5	+24,097209	-49,030448	-18,206070	62	243 7597,5	+40,584781	+40,478400	+12,001388	62
243 7563,0	+30,311055	-45,414096	-17,284765	62	243 7598,0	+35,419569	+45,018945	+13,870881	62
243 7563,5	+36,061961	-41,094304	-16,095724	62	243 7598,5	+29,760451	+48,924919	+15,545626	62
243 7564,0	+41,253852	-36,128773	-14,653759	62	243 7599,0	+23,695910	+52,154444	+17,006118	62
243 7564,5	+45,798232	-30,588597	-12,978708	62	243 7599,5	+17,316739	+54,677213	+18,236774	62
243 7565,0	+49,616836	-24,557283	-11,095254	62	243 7600,0	+10,714328	+56,474063	+19,225852	62
243 7565,5	+52,644054	-18,129124	-9,032487	62	243 7600,5	+3,979180	+57,536336	+19,965319	62
243 7566,0	+54,829076	-11,407049	-6,823278	62	243 7601,0	-2,800309	+57,864950	+20,450599	62
243 7566,5	+56,137462	-4,500019	-4,503456	62	243 7601,5	-9,538789	+57,469577	+20,680334	62
243 7567,0	+56,552159	+2,479886	-2,110856	62	243 7602,0	-16,154651	+56,367806	+20,656126	62
243 7567,5	+56,073652	+9,420503	+0,315712	62	243 7602,5	-22,570525	+54,584199	+20,382250	62
243 7568,0	+54,719547	+16,212529	+2,737509	62	243 7603,0	-28,713624	+52,149658	+19,865442	62
243 7568,5	+52,523421	+22,752219	+5,116868	62	243 7603,5	-34,515963	+49,100685	+19,114656	62
243 7569,0	+49,533094	+28,943674	+7,418060	62	243 7604,0	-39,914488	+45,478796	+18,140872	62
243 7569,5	+45,808564	+34,700564	+9,608015	62	243 7604,5	-44,851173	+41,330075	+16,956940	62
243 7570,0	+41,419759	+39,947385	+11,656871	62	243 7605,0	-49,273140	+36,704803	+15,577470	62
243 7570,5	+36,444194	+44,620128	+13,538324	62	243 7605,5	-53,132694	+31,657041	+14,018683	62
243 7571,0	+30,964800	+48,666517	+15,229842	62	243 7606,0	-56,387478	+26,244432	+12,298355	62
243 7571,5	+25,067838	+52,045768	+16,712678	62	243 7606,5	-59,000672	+20,527930	+10,435732	62
243 7572,0	+18,841210	+54,728185	+17,971838	62	243 7607,0	-60,941159	+14,571553	+8,451462	62
243 7572,5	+12,372976	+56,694517	+18,995919	62	243 7607,5	-62,183905	+8,442170	+6,367532	62
243 7573,0	+5,750154	+57,935133	+19,776904	62	243 7608,0	-62,710243	+2,209193	+4,207189	62
243 7573,5	-0,942174	+58,449248	+20,309932	62	243 7608,5	-62,508297	-10,055768	+1,994848	62
243 7574,0	-7,621556	+58,244169	+20,593092	62	243 7609,0	-61,573431	-10,279302	+0,244040	62
243 7574,5	-14,208699	+57,334552	+20,627163	62	243 7609,5	-59,908681	-16,386738	-2,483137	62
243 7575,0	-20,627826	+55,741737	+20,415445	62	243 7610,0	-57,525251	-22,302797	-4,695413	62
243 7575,5	-26,806992	+53,493202	+19,963552	62	243 7610,5	-54,442866	-27,952304	-6,853391	62
243 7576,0	-32,678229	+50,621987	+19,279249	62	243 7611,0	-50,690194	-33,261140	-8,929444	62
243 7576,5	-38,177825	+47,166410	+18,372358	62	243 7611,5	-46,304987	-38,157189	-10,896124	62
243 7577,0	-43,246434	+43,169601	+17,254599	62	243 7612,0	-41,334206	-42,571452	-12,726551	62
243 7577,5	-47,829295	+38,679241	+15,939532	62	243 7612,5	-35,833935	-46,439261	-14,394825	62
243 7578,0	-51,876419	+33,747269	+14,442445	62	243 7613,0	-29,869092	-49,701506	-15,876500	62
243 7578,5	-55,342966	+28,429694	+12,780326	62	243 7613,5	-23,512849	-52,305819	-17,149013	62
243 7579,0	-58,189405	+22,786230	+10,971737	62	243 7614,0	-16,845932	-54,207802	-18,192167	62
243 7579,5	-60,381945	+16,880083	+9,036767	62	243 7614,5	-9,955609	-55,372119	-18,988571	62
243 7580,0	-61,892891	+10,777584	+6,996934	62	243 7615,0	-2,934517	-55,773436	-19,524023	62
243 7580,5	-62,701061	+4,547828	+4,875060	62	243 7615,5	+4,120718	-55,397281	-19,787923	62
243 7581,0	-62,792167	-1,737800	+2,695163	62	243 7616,0	+11,110996	-54,240594	-19,773516	62
243 7581,5	-62,159205	-8,006130	+0,482266	62	243 7616,5	+17,936372	-52,312088	-19,478146	62
243 7582,0	-60,802902	-14,182837	-1,737769	62	243 7617,0	+24,497737	-49,632475	-18,903410	62
243 7582,5	-58,731982	-20,193107	-3,938471	62	243 7617,5	+30,698540	-46,234325	-18,055218	62
243 7583,0	-55,963516	-25,962423	-6,093018	62	243 7618,0	+36,446514	-42,161779	-16,943793	62
243 7583,5	-52,523010	-31,417393	-8,174501	62	243 7618,5	+41,655310	-37,469980	-15,583569	62
243 7584,0	-48,444574	-36,486639	-10,156246	62	243 7619,0	+46,246120	-32,224333	-13,993014	62
243 7584,5	-43,770892	-41,101758	-12,012134	62	243 7619,5	+50,149123	-26,499517	-12,194379	62
243 7585,0	-38,553062	-45,198282	-13,716949	62	243 7620,0	+53,304876	-20,378313	-10,213361	62
243 7585,5	-32,850305	-48,716623	-15,246733	62	243 7620,5	+55,665465	-13,950257	-8,078699	62
243 7586,0	-26,729640	-51,603170	-16,579162	62	243 7621,0	+57,195532	-7,310113	-5,821696	62

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z	J.D.	x	y	z
243 7621,5	+57,873039	-0,556175	-3,475668	243 7656,5	-13,089089	+56,666924	+20,966490
243 7622,0	+57,689703	+6,211517	-1,075334	243 7657,0	-19,668699	+55,092188	+20,818494
243 7622,5	+56,651257	+12,893072	+1,343815	243 7657,5	-26,009106	+52,858559	+20,422227
243 7623,0	+54,777300	+19,390645	+3,746208	243 7658,0	-32,036998	+50,000733	+19,785383
243 7623,5	+52,100811	+25,610307	+6,096876	243 7658,5	-37,684329	+46,559536	+18,918157
243 7624,0	+48,667359	+31,463844	+8,362127	243 7659,0	-42,888626	+42,581073	+17,832938
243 7624,5	+44,533936	+36,870320	+10,510165	243 7659,5	-47,593349	+38,116141	+16,544148
243 7625,0	+39,767618	+41,757491	+12,511664	243 7660,0	-51,747963	+33,219464	+15,067968
243 7625,5	+34,443872	+46,062868	+14,340246	243 7660,5	-55,308081	+27,949205	+13,422165
243 7626,0	+28,644875	+49,734546	+15,972860	243 7661,0	-58,235522	+22,366407	+11,625923
243 7626,5	+22,457616	+52,731572	+17,390032	243 7661,5	-60,498283	+16,534560	+9,699670
243 7627,0	+15,972126	+55,024110	+18,576013	243 7662,0	-62,070623	+10,519237	+7,664953
243 7627,5	+9,279774	+56,593326	+19,518853	243 7662,5	-62,933061	+4,387744	+5,544342
243 7628,0	+2,471681	+57,430844	+20,210277	243 7663,0	-63,072501	+1,791162	+3,361306
243 7628,5	-4,362629	+57,538251	+20,645621	243 7663,5	-62,482317	+7,947542	+1,140150
243 7629,0	-11,136382	+56,926301	+20,823591	243 7664,0	-61,162646	-14,010564	+1,094084
243 7629,5	-17,766485	+55,614066	+20,746031	243 7664,5	-59,120520	-19,908809	+3,315708
243 7630,0	-24,174248	+53,628156	+20,417694	243 7665,0	-56,370324	-25,570641	+5,498479
243 7630,5	-30,285893	+51,001801	+19,845942	243 7665,5	-52,934115	-30,924673	+7,615763
243 7631,0	-36,032889	+47,774051	+19,040490	243 7666,0	-48,842034	-35,900321	+9,640685
243 7631,5	-41,352240	+43,989149	+18,013205	243 7666,5	-44,132735	-40,428520	-11,546364
243 7632,0	-46,186561	+39,695828	+16,777855	243 7667,0	-38,853801	-44,442627	-13,306198
243 7632,5	-50,484168	+34,946768	+15,349935	243 7667,5	-33,061997	-47,879443	-14,894208
243 7633,0	-54,199080	+29,798142	+13,746500	243 7668,0	-26,823506	-50,680510	-16,285501
243 7633,5	-57,291101	+24,309265	+11,986056	243 7668,5	-20,213788	-52,793452	-17,456724
243 7634,0	-59,725852	+18,542257	+10,088437	243 7669,0	-13,317309	-54,173605	-18,386676
243 7634,5	-61,474886	+12,561788	+8,074732	243 7669,5	-6,226793	-54,785591	-19,056914
243 7635,0	-62,515811	+6,434825	+5,967203	243 7670,0	+0,957889	-54,604947	-19,452393
243 7635,5	-62,832542	+0,230408	+3,789215	243 7670,5	+8,131264	-53,619606	-19,562090
243 7636,0	-62,415566	-5,980623	+1,565172	243 7671,0	+15,184268	-51,831132	-19,379579
243 7636,5	-61,262307	-12,125922	+0,679567	243 7671,5	+22,006609	-49,255588	-18,903473
243 7637,0	-59,377561	-18,132020	+2,918808	243 7672,0	+28,489403	-45,923926	-18,137751
243 7637,5	-56,773911	-23,924817	+5,125654	243 7672,5	+34,527979	-41,881835	-17,091877
243 7638,0	-53,472260	-29,430196	+7,272690	243 7673,0	+40,024643	-37,188989	-15,780702
243 7638,5	-49,502269	-34,574796	+9,332242	243 7673,5	+44,891212	-31,917701	-14,224167
243 7639,0	-44,902749	-39,286928	-11,276657	243 7674,0	+49,051260	-26,151186	-12,446821
243 7639,5	-39,721947	-43,497638	-13,078675	243 7674,5	+52,441841	-19,981359	-10,477161
243 7640,0	-34,017714	-47,141999	-14,711864	243 7675,0	+55,014643	-13,506450	-8,346854
243 7640,5	-27,857412	-50,160494	-16,151125	243 7675,5	+56,736664	-6,828569	-6,089918
243 7641,0	-21,317494	-52,500378	-17,373194	243 7676,0	+57,590325	-0,051281	-3,741881
243 7641,5	-14,482877	-54,117277	-18,357244	243 7676,5	+57,573047	+6,722640	-1,338953
243 7642,0	-7,445895	-54,976549	-19,085430	243 7677,0	+56,696490	+13,393202	+1,082728
243 7642,5	+0,304943	-55,054623	-19,543449	243 7677,5	+54,985589	+19,864912	+3,487759
243 7643,0	+6,837214	-54,340046	-19,721005	243 7678,0	+52,477275	+26,048190	+5,842060
243 7643,5	+13,875386	-52,834304	-19,612228	243 7678,5	+49,219151	+31,860497	+8,113357
243 7644,0	+20,704101	-50,552239	-19,215949	243 7679,0	+45,268111	+37,227208	+10,271575
243 7644,5	+27,219834	-47,522077	-18,535840	243 7679,5	+40,688976	+42,082263	+12,289159
243 7645,0	+33,323224	-43,785057	-17,580424	243 7680,0	+35,553106	+46,368568	+14,141305
243 7645,5	+38,921228	-39,394734	-16,362967	243 7680,5	+29,937118	+50,038311	+15,806148
243 7646,0	+43,928995	-34,415812	-14,901163	243 7681,0	+23,921630	+53,053056	+17,264885
243 7646,5	+48,271569	-28,922822	-13,216790	243 7681,5	+17,590077	+55,383795	+18,501859
243 7647,0	+51,885236	-22,998524	-11,335214	243 7682,0	+11,027573	+57,010847	+19,504608
243 7647,5	+54,718620	-16,732213	-9,284863	243 7682,5	+4,319848	+57,923685	+20,263863
243 7648,0	+56,733313	-10,217885	-7,096623	243 7683,0	+2,447776	+58,120611	+20,773503
243 7648,5	+57,904290	-3,552444	-4,803229	243 7683,5	-9,191298	+57,608535	+21,030538
243 7649,0	+58,220069	+3,166053	-2,438640	243 7684,0	-15,828940	+56,402483	+21,034986
243 7649,5	+57,682518	+9,840119	-0,037451	243 7684,5	-22,281942	+54,525117	+20,789763
243 7650,0	+56,306466	+16,374443	+2,365733	243 7685,0	-28,475306	+52,006277	+20,300559
243 7650,5	+54,119096	+22,677394	+4,736836	243 7685,5	-34,338411	+48,882308	+19,575652
243 7651,0	+51,159192	+28,662382	+7,042862	243 7686,0	-39,805561	+45,195488	+18,625730
243 7651,5	+47,476177	+34,249114	+9,252372	243 7686,5	-44,816474	+40,993417	+17,463723
243 7652,0	+43,129044	+39,364648	+11,335940	243 7687,0	-49,316596	+36,328340	+16,104563
243 7652,5	+38,185124	+43,944330	+13,266553	243 7687,5	-53,257457	+31,256567	+14,565015
243 7653,0	+32,718770	+47,932471	+15,019928	243 7688,0	-56,596802	+25,837817	+12,863458
243 7653,5	+26,810059	+51,283002	+16,574826	243 7688,5	-59,298767	+20,134668	+11,019687
243 7654,0	+20,543266	+53,959698	+17,913233	243 7689,0	-61,333989	+14,212026	+9,054752
243 7654,5	+14,005544	+55,936466	+19,020529	243 7689,5	-62,679623	+8,136620	+6,990760
243 7655,0	+7,285450	+57,197194	+19,885532	243 7690,0	-63,319409	+1,976552	+4,850743
243 7655,5	+0,471663	+57,735606	+20,500528	243 7690,5	-63,243684	+4,199112	+2,658502
243 7656,0	-6,348278	+57,554828	+20,861194	243 7691,0	-62,449424	-10,320718	+0,438470

RECTANGULAR COORDINATES OF THE MOON 1952-1971

J.D.	x	y	z	J.D.	x	y	z
243 7691.5	-60,940350	-16,318404	-1,784391	243 7726.5	+23,467606	-49,061112	-18,943187
243 7692.0	-58,726937	-22,122429	-3,984727	243 7727.0	+29,688047	-45,412955	-18,054705
243 7692.5	-55,826697	-27,663569	-6,136914	243 7727.5	+35,455098	-41,060392	-16,886251
243 7693.0	-52,264233	-32,873490	-8,215163	243 7728.0	+40,669301	-36,059155	-15,451062
243 7693.5	-48,071609	-37,685261	-10,193702	243 7728.5	+45,238081	-30,479319	-13,767941
243 7694.0	-43,288468	-42,033835	-12,046930	243 7729.0	+49,078781	-24,404475	-11,861139
243 7694.5	-37,962468	-45,856826	-13,749649	243 7729.5	+52,121516	-17,930106	-9,759976
243 7695.0	-32,149364	-49,095182	-15,277316	243 7730.0	+54,311612	-11,161297	-7,498190
243 7695.5	-25,913356	-51,694266	-16,606396	243 7730.5	+55,611616	-4,209951	-5,113079
243 7696.0	-19,327054	-53,604903	-17,714721	243 7731.0	+56,002462	+2,808440	-2,644438
243 7696.5	-12,471431	-54,784703	-18,581986	243 7731.5	+55,483766	+9,778145	-0,133368
243 7697.0	-5,435450	-55,199487	-19,190266	243 7732.0	+54,073407	+16,586461	+2,378895
243 7697.5	+1,684622	-54,824849	-19,524606	243 7732.5	+51,806139	+23,126646	+4,852115
243 7698.0	+8,786302	-53,647760	-19,573679	243 7733.0	+48,731865	+29,300401	+7,248060
243 7698.5	+15,762454	-51,667937	-19,330357	243 7733.5	+44,913241	+35,019705	+9,531308
243 7699.0	+22,503296	-48,899238	-18,792336	243 7734.0	+40,423230	+40,208069	+11,669854
243 7699.5	+28,898874	-45,370503	-17,962609	243 7734.5	+35,342653	+44,801232	+13,635509
243 7700.0	+34,841916	-41,126051	-16,849816	243 7735.0	+29,757771	+48,747270	+15,404120
243 7700.5	+40,230839	-36,225387	-15,468346	243 7735.5	+23,758228	+52,006460	+16,955632
243 7701.0	+44,972890	-30,742389	-13,838261	243 7736.0	+17,435145	+54,550612	+18,273999
243 7701.5	+48,986993	-24,763681	-11,984893	243 7736.5	+10,879657	+56,362510	+19,347070
243 7702.0	+52,206276	-18,386459	-9,938258	243 7737.0	+4,181638	+57,435006	+20,166347
243 7702.5	+54,579940	-11,715758	-7,732199	243 7737.5	-2,251248	+57,770261	+20,726793
243 7703.0	+56,074449	-4,861461	-5,403411	243 7738.0	-9,294333	+57,378862	+21,026566
243 7703.5	+56,673907	+2,064792	-2,990366	243 7738.5	-15,906500	+56,279075	+21,066788
243 7704.0	+56,379727	+8,952580	-0,532250	243 7739.0	-22,330645	+54,496152	+20,851334
243 7704.5	+55,209624	+15,695344	+1,932050	243 7739.5	-28,494020	+52,061647	+20,386608
243 7705.0	+53,196211	+22,192649	+4,364839	243 7740.0	-34,328526	+49,012902	+19,681390
243 7705.5	+50,385128	+28,351937	+6,730346	243 7740.5	-39,770956	+45,392479	+18,746643
243 7706.0	+46,833128	+34,089814	+8,995313	243 7741.0	-44,763212	+41,247697	+17,595366
243 7706.5	+42,606096	+39,332900	+11,129429	243 7741.5	-49,252565	+36,630220	+16,242468
243 7707.0	+37,777093	+44,018232	+13,105595	243 7742.0	-53,191850	+31,595597	+14,704602
243 7707.5	+32,424570	+48,093407	+14,900093	243 7742.5	-56,539658	+26,202831	+13,000053
243 7708.0	+26,630803	+51,516484	+16,492660	243 7743.0	-59,260617	+20,513997	+11,148590
243 7708.5	+20,480467	+54,255690	+17,866467	243 7743.5	-61,325596	+14,593780	+9,171339
243 7709.0	+14,059400	+56,289033	+19,008077	243 7744.0	-62,711903	+8,509024	+7,090637
243 7709.5	+7,453568	+57,603849	+19,907339	243 7744.5	-63,403461	+2,328248	+4,929856
243 7710.0	+0,748142	+58,196351	+20,557298	243 7745.0	-63,391092	-3,878850	+2,713263
243 7710.5	-5,973277	+58,071030	+20,954036	243 7745.5	-62,672566	-10,041921	+0,465812
243 7711.0	-12,629352	+57,240293	+21,096580	243 7746.0	-61,252801	-16,090536	-1,870717
243 7711.5	-19,141625	+55,723872	+20,986754	243 7746.5	-59,143833	-21,954731	-4,019443
243 7712.0	-25,435054	+53,548392	+20,629042	243 7747.0	-56,364995	-27,565629	-6,205578
243 7712.5	-31,438542	+50,746893	+20,030459	243 7747.5	-52,942797	-32,856001	-8,319642
243 7713.0	-37,085371	+47,358317	+19,200402	243 7748.0	-48,910912	-37,760890	-10,336179
243 7713.5	-42,313662	+43,427034	+18,150507	243 7748.5	-44,310145	-42,218241	-12,230299
243 7714.0	-47,066722	+39,002315	+16,894496	243 7749.0	-39,188270	-46,169538	-13,977895
243 7714.5	-51,293435	+34,137870	+15,448018	243 7749.5	-33,599845	-49,560385	-15,555891
243 7715.0	-54,948502	+28,891249	+13,828478	243 7750.0	-27,606067	-52,341246	-16,942487
243 7715.5	-57,992792	+23,233394	+12,054895	243 7750.5	-21,274478	-54,468082	-18,117435
243 7716.0	-60,939503	+17,498057	+10,147691	243 7751.0	-14,678662	-55,903042	-19,062287
243 7716.5	-62,124401	+11,481282	+8,128552	243 7751.5	-7,897906	-56,615345	-19,760752
243 7717.0	-63,165887	+5,340858	+6,020211	243 7752.0	-1,016668	-56,581963	-19,189553
243 7717.5	-63,505182	-0,854180	+3,846306	243 7752.5	+5,876008	-55,788510	-20,365818
243 7718.0	-63,136357	-7,034091	+1,631176	243 7753.0	+12,687277	-54,230144	-20,253428
243 7718.5	-62,060321	-13,128891	-0,600305	243 7753.5	+19,321475	-51,912415	-19,857406
243 7719.0	-60,284988	-19,068870	-2,822888	243 7754.0	+25,681334	-48,852075	-19,177282
243 7719.5	-57,825182	-24,785043	-5,011121	243 7754.5	+31,669450	-45,077809	-18,216849
243 7720.0	-54,702722	-30,209642	-7,139525	243 7755.0	+37,190076	-40,630832	-16,984507
243 7720.5	-50,946372	-35,276553	-9,182742	243 7755.5	+42,151142	-35,565148	-15,493489
243 7721.0	-46,591996	-39,921876	-11,115725	243 7756.0	+46,466554	-29,947533	-13,761995
243 7721.5	-41,682503	-44,084400	-12,913921	243 7756.5	+50,058617	-23,857012	-11,813192
243 7722.0	-36,267909	-47,706181	-14,553461	243 7757.0	+52,860500	-17,383845	-9,674992
243 7722.5	-30,405456	-50,733272	-16,011411	243 7757.5	+54,818687	-10,627967	-7,379661
243 7723.0	-24,159534	-53,116405	-17,266030	243 7758.0	+55,894963	-3,696820	-4,963183
243 7723.5	-17,601662	-54,811837	-18,297065	243 7758.5	+56,068078	+3,297262	-2,464427
243 7724.0	-10,810363	-55,782408	-19,086137	243 7759.0	+55,334726	+10,240027	+0,075860
243 7724.5	-3,870834	-55,998505	-19,617103	243 7759.5	+53,709694	+17,018457	+2,616161
243 7725.0	+3,125534	-55,439378	-19,876567	243 7760.0	+51,225431	+23,523888	+5,115344
243 7725.5	+10,081942	-54,094260	-19,854321	243 7760.5	+47,930648	+29,654858	+7,533778
243 7726.0	+16,897278	-51,963788	-19,543921	243 7761.0	+43,888451	+35,319538	+9,834322

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z	J.D.	x	y	z
243 7761,5	+39,173925	+40,437582	+11,983151	243 7796,5	-52,253820	+31,902379	+15,218442
243 7762,0	+33,871557	+44,941363	+13,950385	243 7797,0	-55,761314	+26,612384	+13,534051
243 7762,5	+28,072498	+48,776566	+15,710454	243 7797,5	-58,627439	+21,013654	+11,692795
243 7763,0	+21,872057	+51,902284	+17,242328	243 7798,0	-60,823597	+15,171181	+9,716260
243 7763,5	+15,367357	+54,290586	+18,529501	243 7798,5	-62,327545	+9,151652	+7,627087
243 7764,0	+8,655342	+55,925801	+19,559869	243 7799,0	-63,123414	+3,023117	+5,448861
243 7764,5	+1,831166	+56,803547	+20,325498	243 7799,5	-63,201906	+3,145285	+3,206035
243 7765,0	-5,013098	+56,929713	+20,822330	243 7800,0	-62,560357	+9,283690	+0,923796
243 7765,5	-11,789422	+56,319336	+21,049867	243 7800,5	-61,202925	-15,321861	-1,372051
243 7766,0	-18,414488	+54,995507	+21,010807	243 7801,0	-59,140894	-21,189645	-3,655222
243 7766,5	-24,810171	+52,988482	+20,710763	243 7801,5	-56,392783	-26,817456	-5,899110
243 7767,0	-30,903824	+50,334708	+20,157940	243 7802,0	-52,984625	-32,136883	-8,077010
243 7767,5	-36,628431	+47,076079	+19,362876	243 7802,5	-48,950080	-37,081337	-10,162327
243 7768,0	-41,922745	+43,259308	+18,338229	243 7803,0	-44,330560	-41,586820	-12,128854
243 7768,5	-46,731327	+38,935308	+17,098561	243 7803,5	-39,175263	-45,592784	-13,951075
243 7769,0	-51,004535	+34,158688	+15,660147	243 7804,0	-33,540992	-49,042985	-15,604504
243 7769,5	-54,698652	+28,987383	+14,040870	243 7804,5	-27,491950	-51,886434	-17,066030
243 7770,0	-57,775963	+23,482252	+12,260059	243 7805,0	-21,099347	-54,078421	-18,314325
243 7770,5	-60,204759	+17,706691	+10,338377	243 7805,5	-14,440758	-55,581365	-19,330201
243 7771,0	-61,959629	+11,726325	+8,297712	243 7806,0	-7,599427	-56,365805	-20,097014
243 7771,5	-63,021420	+5,608608	+6,161038	243 7806,5	-0,663307	-56,411228	-20,601041
243 7772,0	-63,377653	-0,757532	+3,952332	243 7807,0	+6,276027	-55,706744	-20,831803
243 7772,5	-63,022580	-6,762135	+1,696393	243 7807,5	+13,124620	-54,251769	-20,782395
243 7773,0	-61,957394	-12,874670	+0,581282	243 7808,0	+19,787492	-52,056388	-20,449732
243 7773,5	-60,190501	-18,844560	-2,854694	243 7808,5	+26,170092	-49,141644	-19,834739
243 7774,0	-57,737608	-24,601744	-5,097519	243 7809,0	+32,179834	-45,539613	-18,942506
243 7774,5	-54,621912	-30,077409	-7,283352	243 7809,5	+37,727662	-41,293298	-17,782353
243 7775,0	-50,874094	-35,204455	-9,385926	243 7810,0	+42,729591	-36,456235	-16,367799
243 7775,5	-46,532373	-39,918454	-11,379392	243 7810,5	+47,108321	-31,092032	-14,716510
243 7776,0	-41,642371	-44,158270	-13,238585	243 7811,0	+50,794720	-25,273565	-12,850120
243 7776,5	-36,256935	-47,866845	-14,939313	243 7811,5	+53,729220	-19,082016	-10,793963
243 7777,0	-30,435939	-50,992085	-16,458682	243 7812,0	+55,863248	-12,605748	-8,576792
243 7777,5	-24,245785	-53,487501	-17,775380	243 7812,5	+57,160269	-5,938878	-6,230314
243 7778,0	-17,759030	-55,313080	-18,870008	243 7813,0	+57,596917	+0,820256	-3,788720
243 7778,5	-11,053763	-56,436021	-19,725380	243 7813,5	+57,163648	+7,570871	-1,288087
243 7779,0	-4,212930	-56,831418	-20,326837	243 7814,0	+55,865283	+14,211623	+1,234268
243 7779,5	+2,676448	-56,483002	-20,662550	243 7814,5	+53,721065	+20,642594	+3,740520
243 7780,0	+9,524176	-55,383690	-20,723797	243 7815,0	+50,764563	+26,767345	+6,193075
243 7780,5	+16,237879	-53,536205	-20,505245	243 7815,5	+47,042918	+32,494884	+8,555349
243 7781,0	+22,724125	-50,953565	-20,005210	243 7816,0	+42,615938	+37,741554	+10,792522
243 7781,5	+28,889728	-47,659542	-19,225915	243 7816,5	+37,554736	+42,432751	+12,872256
243 7782,0	+34,643079	-43,688845	-18,173659	243 7817,0	+31,940005	+46,504289	+14,765330
243 7782,5	+39,895720	-39,087340	-16,858976	243 7817,5	+25,860105	+49,903464	+16,446151
243 7783,0	+44,563993	-33,911953	-15,296746	243 7818,0	+19,409029	+52,589807	+17,893182
243 7783,5	+48,570797	-28,230385	-13,506195	243 7818,5	+12,684218	+54,535300	+19,089179
243 7784,0	+51,847412	-22,120520	-11,510809	243 7819,0	+5,784521	+55,724325	+20,021321
243 7784,5	+54,335393	-15,669530	-9,338144	243 7819,5	+1,191750	+56,153221	+20,681178
243 7785,0	+55,988267	-8,972560	-7,019472	243 7820,0	+8,148561	+55,829584	+21,064590
243 7785,5	+56,773264	-2,131112	-4,589301	243 7820,5	-14,993608	+54,771313	+21,171426
243 7786,0	+56,672547	+4,148983	-2,084743	243 7821,0	-21,639505	+53,005561	+21,005269
243 7786,5	+55,684270	+11,559891	+0,455266	243 7821,5	-28,004705	+50,567643	+20,573109
243 7787,0	+53,822927	+18,194308	+2,990856	243 7822,0	-34,014120	+47,499857	+19,884945
243 7787,5	+51,119295	+24,548081	+5,482183	243 7822,5	-39,599516	+43,850403	+18,953412
243 7788,0	+47,619724	+30,522807	+7,890405	243 7823,0	-44,699751	+39,672424	+17,793463
243 7788,5	+43,384816	+36,028202	+10,178648	243 7823,5	-49,260870	+35,023107	+16,422048
243 7789,0	+38,487630	+40,984131	+12,312845	243 7824,0	-53,235976	+29,962849	+14,857789
243 7789,5	+33,011484	+45,322180	+14,262481	243 7824,5	-56,585216	+24,554671	+13,120778
243 7790,0	+27,047555	+48,986742	+16,001128	243 7825,0	-59,275599	+18,863616	+11,232349
243 7790,5	+20,692316	+51,935492	+17,506808	243 7825,5	-61,280854	+12,956307	+9,214887
243 7791,0	+14,045128	+54,139419	+18,762164	243 7826,0	-62,581381	+6,900572	+7,091714
243 7791,5	+7,205995	+55,582426	+19,754472	243 7826,5	-63,164109	+0,765107	+4,886940
243 7792,0	+0,273573	+56,260536	+20,475481	243 7827,0	-63,022510	+5,380814	+2,625371
243 7792,5	-6,656440	+56,180939	+20,921191	243 7827,5	-62,156716	+11,467639	+0,332400
243 7793,0	-13,492604	+55,360773	+21,091493	243 7828,0	-60,573486	+17,425821	+1,966086
243 7793,5	-20,148697	+53,826047	+20,989849	243 7828,5	-58,286464	+23,186180	+4,243826
243 7794,0	-26,544366	+51,610382	+20,622876	243 7829,0	-55,316329	+28,680287	+6,474315
243 7794,5	-32,605550	+48,753957	+20,000000	243 7829,5	-51,691020	+33,840951	+8,630959
243 7795,0	-38,264729	+45,302560	+19,133139	243 7830,0	-47,445973	+38,602800	+10,687268
243 7795,5	-43,460962	+41,306649	+18,036341	243 7830,5	-42,624268	+42,902957	+12,617097
243 7796,0	-48,139934	+36,820670	+16,725570	243 7831,0	-37,276812	+46,681842	+14,394919

J.D.	x	y	z	J.D.	x	y	z		
243 7831,5	-31,462333	-49,884091	-15,996165	62	243 7856,5	-54,453022	-30,470597	-7,034436	63
243 7832,0	-25,247281	-52,459549	-17,397591	62	243 7857,0	-50,669912	-35,480189	-9,156718	63
243 7832,5	-18,705517	-54,364328	-18,577691	62	243 7857,5	-46,281221	-40,069697	-11,171145	63
243 7833,0	-11,917852	-55,562024	-19,517179	62	243 7858,0	-41,330873	-44,178434	-13,052186	63
243 7833,5	-4,971246	-56,024712	-20,199401	62	243 7858,5	-35,870227	-47,748901	-14,774905	63
243 7834,0	+2,042160	-55,734118	-20,610852	62	243 7859,0	-29,958157	-50,727570	-16,315255	63
243 7834,5	+9,026327	-54,682496	-20,741578	62	243 7859,5	-23,661148	-53,065848	-17,650411	63
243 7835,0	+15,882807	-52,873425	-20,585584	62	243 7860,0	-17,053113	-54,721069	-18,759136	63
243 7835,5	+22,512467	-50,322356	-20,141166	62	243 7860,5	-10,215159	-55,657697	-19,622264	63
243 7836,0	+28,817308	-47,056781	-19,411099	62	243 7861,0	-3,234982	-55,848509	-20,223166	63
243 7836,5	+34,702466	-43,116292	-18,402819	62	243 7861,5	+3,793953	-55,275868	-20,548269	63
243 7837,0	+40,078081	-38,552068	-17,128364	62	243 7862,0	+10,773590	-53,932907	-20,587603	63
243 7837,5	+44,861215	-33,426229	-15,604292	62	243 7862,5	+17,602783	-51,824517	-20,335250	63
243 7838,0	+48,977600	-27,810830	-13,851430	62	243 7863,0	+24,179130	-48,968271	-19,789846	63
243 7838,5	+52,363152	-21,786566	-11,894532	62	243 7863,5	+30,401094	-45,394874	-18,954892	63
243 7839,0	+54,965272	-15,441312	-9,761820	62	243 7864,0	+36,170292	-41,148247	-17,838971	63
243 7839,5	+56,743898	-8,868477	-7,484480	62	243 7864,5	+41,393870	-36,285206	-16,455795	63
243 7840,0	+57,672228	-2,165270	-5,096075	62	243 7865,0	+45,986918	-30,874651	-14,824115	63
243 7840,5	+57,737128	+4,569109	-2,631912	62	243 7865,5	+49,874624	-24,996284	-12,967397	63
243 7841,0	+56,939335	+11,235273	-0,128403	62	243 7866,0	+52,994161	-18,738895	-10,913350	63
243 7841,5	+55,293307	+17,735437	+2,377603	62	243 7866,5	+55,296209	-12,198407	-8,693321	63
243 7842,0	+52,826784	+23,975137	+4,849480	62	243 7867,0	+56,746011	-5,475647	-6,341567	63
243 7842,5	+49,580170	+29,864847	+7,251462	62	243 7867,5	+57,323922	+1,325942	-3,894445	63
243 7843,0	+45,605588	+35,321467	+9,549257	62	243 7868,0	+57,025541	+8,102579	-1,389608	63
243 7843,5	+40,965850	+40,269694	+11,710624	62	243 7868,5	+55,861298	+14,752319	+1,134834	63
243 7844,0	+35,733076	+44,643124	+13,705877	62	243 7869,0	+53,855782	+21,176998	+3,641077	63
243 7844,5	+29,987305	+48,385255	+15,508363	62	243 7869,5	+51,046770	+27,284022	+6,092341	63
243 7845,0	+23,814889	+51,450176	+17,094821	62	243 7870,0	+47,483871	+32,987756	+8,453499	63
243 7845,5	+17,306844	+53,803111	+18,445719	62	243 7870,5	+43,227240	+38,210792	+10,691617	63
243 7846,0	+10,557117	+55,420523	+19,545406	62	243 7871,0	+38,346041	+42,884842	+12,776424	63
243 7846,5	+3,660959	+56,290208	+20,382286	62	243 7871,5	+32,916941	+46,951444	+14,680663	63
243 7847,0	-3,286735	+56,410944	+20,948794	62	243 7872,0	+27,022563	+50,362416	+16,380387	63
243 7847,5	-10,192918	+55,792069	+21,241374	62	243 7872,5	+20,749988	+53,080111	+17,855159	63
243 7848,0	-16,967729	+54,452707	+21,260275	62	243 7873,0	+14,189306	+55,077554	+19,088221	63
243 7848,5	-23,525701	+52,421045	+21,009395	62	243 7873,5	+7,432157	+56,338245	+20,066531	63
243 7849,0	-29,786695	+49,733339	+20,495978	62	243 7874,0	+0,570442	+56,856063	+20,780823	63
243 7849,5	-35,676668	+46,432939	+19,730318	62	243 7874,5	-6,304963	+56,634799	+21,225532	63
243 7850,0	-41,128256	+42,569305	+18,725442	62	243 7875,0	-13,105351	+55,687735	+21,398740	63
243 7850,5	-46,081148	+38,197038	+17,496784	62	243 7875,5	-19,745265	+54,037097	+21,302039	63
Epoch 1963.0					243 7876,0	-26,143414	+51,713258	+20,940331	63
243 7842,0	+52,820953	+23,986944	+4,854614	63	243 7876,5	-32,223529	+48,754103	+20,321650	63
243 7842,5	+49,572789	+29,875927	+7,256280	63	243 7877,0	-37,915048	+45,204222	+19,456915	63
243 7843,0	+45,596764	+35,331659	+9,553689	63	243 7877,5	-43,153652	+41,114015	+18,359658	63
243 7843,5	+40,955710	+40,278848	+11,714606	63	243 7878,0	-47,881731	+36,538920	+17,045766	63
243 7844,0	+35,721765	+44,651109	+13,709350	63	243 7878,5	-52,048657	+31,538541	+15,533185	63
243 7844,5	+29,974982	+48,391955	+15,511279	63	243 7879,0	-55,611004	+26,175874	+13,841655	63
243 7845,0	+23,801728	+51,455497	+17,097137	63	243 7879,5	-58,532613	+20,516525	+11,992429	63
243 7845,5	+17,293026	+53,806977	+18,447402	63	243 7880,0	-60,784552	+14,627994	+10,008006	63
243 7846,0	+10,542831	+55,422881	+19,546433	63	243 7880,5	-62,345176	+8,579091	+7,911922	63
243 7846,5	+3,646397	+56,291024	+20,382643	63	243 7881,0	-63,199832	+2,439289	+5,728495	63
243 7847,0	-3,301378	+56,410207	+20,948476	63	243 7881,5	-63,340900	-3,721716	+3,482663	63
243 7847,5	-10,207451	+55,789789	+21,240385	63	243 7882,0	-62,767518	-9,834483	+1,199792	63
243 7848,0	-16,981965	+54,448912	+21,258628	63	243 7882,5	-61,485537	-15,830206	+1,094469	63
243 7848,5	-23,539458	+52,415784	+21,007111	63	243 7883,0	-59,507378	-21,641072	+3,374329	63
243 7849,0	-29,799802	+49,726679	+20,493085	63	243 7883,5	-56,851953	-27,200593	-5,613982	63
243 7849,5	-35,688962	+46,424963	+19,726853	63	243 7884,0	-53,544652	-32,443930	-7,787727	63
243 7850,0	-41,139589	+42,560111	+18,721447	63	243 7884,5	-49,617404	-37,308274	-9,870102	63
243 7850,5	-46,091384	+38,186737	+17,492308	63	243 7885,0	-45,108637	-41,733170	-11,836014	63
243 7851,0	-50,491250	+33,363600	+16,056927	63	243 7885,5	-40,063422	-45,660990	-13,660885	63
243 7851,5	-54,293472	+28,152859	+14,434597	63	243 7886,0	-34,533610	-49,037482	-15,320864	63
243 7852,0	-57,459624	+22,619218	+12,646085	63	243 7886,5	-28,577858	-51,812342	-16,793015	63
243 7852,5	-59,958451	+16,829310	+10,713398	63	243 7887,0	-22,261731	-53,939988	-18,055608	63
243 7853,0	-61,765841	+10,851120	+8,659578	63	243 7887,5	-15,657683	-55,380452	-19,088441	63
243 7853,5	-62,864509	+4,753478	+6,508492	63	243 7888,0	-8,844876	-56,100308	-19,873190	63
243 7854,0	-63,244040	-1,394318	+4,284695	63	243 7888,5	-1,908873	-56,073837	-20,393871	63
243 7854,5	-62,900599	-7,522869	+2,013269	63	243 7889,0	+5,058937	-55,284260	-20,637322	63
243 7855,0	-61,837052	-13,563004	-0,280270	63	243 7889,5	+11,962229	-53,724881	-20,593706	63
243 7855,5	-60,062800	-19,446052	-2,570103	63	243 7890,0	+18,700965	-51,400368	-20,257063	63
243 7856,0	-57,593864	-25,104156	-4,830200	63	243 7890,5	+25,172998	-48,327810	-19,625823	63
					243 7891,0	+31,276064	-44,537581	-18,703289	63

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z	J.D.	x	y	z		
243 7891,5	+36,910102	-40,073814	-17,497964	63	243 7926,5	+26,721236	+49,287786	+16,196996	63
243 7892,0	+41,979840	-34,994431	-16,023782	63	243 7927,0	+20,438681	+52,207859	+17,751957	63
243 7892,5	+46,397549	-29,370675	-14,300139	63	243 7927,5	+13,866639	+54,380007	+19,052608	63
243 7893,0	+50,085659	-23,285913	-12,351658	63	243 7928,0	+7,102412	+55,790901	+20,086563	63
243 7893,5	+52,979287	-16,834019	-10,207787	63	243 7928,5	+0,241551	+56,438370	+20,845682	63
243 7894,0	+55,028222	-10,117101	-7,902119	63	243 7929,0	-6,623366	+56,330488	+21,325834	63
243 7894,5	+56,198534	-3,242917	-5,471564	63	243 7929,5	-13,403677	+55,484505	+21,526586	63
243 7895,0	+56,473290	+3,677994	-2,955354	63	243 7930,0	-20,015367	+53,925936	+21,450899	63
243 7895,5	+55,852835	+10,535189	-0,394022	63	243 7930,5	-26,379609	+51,687664	+21,104865	63
243 7896,0	+54,354204	+17,221074	+2,171674	63	243 7931,0	-32,423157	+48,809049	+20,497393	63
243 7896,5	+52,010131	+23,633415	+4,701726	63	243 7931,5	-38,078686	+45,335235	+19,639985	63
243 7897,0	+48,867413	+29,677386	+7,157773	63	243 7932,0	-43,284969	+41,316356	+18,546459	63
243 7897,5	+44,985175	+35,267259	+9,503827	63	243 7932,5	-47,987084	+36,806930	+17,232754	63
243 7898,0	+40,432824	+40,327578	+11,706894	63	243 7933,0	-52,136572	+31,865275	+15,716699	63
243 7898,5	+35,288000	+44,793903	+13,737373	63	243 7933,5	-55,691592	+26,552927	+14,017852	63
243 7899,0	+29,634620	+48,613236	+15,569387	63	243 7934,0	-58,616965	+20,934067	+12,157247	63
243 7899,5	+23,560982	+51,744059	+17,180927	63	243 7934,5	-60,884342	+15,075008	+10,157259	63
243 7900,0	+17,158081	+54,156141	+18,553914	63	243 7935,0	-62,472192	+9,043642	+8,041368	63
243 7900,5	+10,518111	+55,830268	+19,674225	63	243 7935,5	-63,365983	+2,908940	+5,834001	63
243 7901,0	+3,733097	+56,757677	+20,531581	63	243 7936,0	-63,558094	+3,259620	+3,560324	63
243 7901,5	-3,106255	+56,939475	+21,119420	63	243 7936,5	-63,047868	-9,392553	+1,246040	63
243 7902,0	-9,911562	+56,386078	+21,434775	63	243 7937,0	-61,841535	-15,420894	+1,082799	63
243 7902,5	-16,597648	+55,116538	+21,478100	63	243 7937,5	-59,952247	-21,276757	+3,399992	63
243 7903,0	-23,083284	+53,157815	+21,253047	63	243 7938,0	-57,399833	-26,893797	+5,679398	63
243 7903,5	-29,291854	+50,544171	+20,766305	63	243 7938,5	-54,210778	-32,207748	+7,895116	63
243 7904,0	-35,151914	+47,316444	+20,027384	63	243 7939,0	-50,418021	-37,156892	+10,021687	63
243 7904,5	-40,597655	+43,521354	+19,048375	63	243 7939,5	-46,060793	-41,682547	+12,034281	63
243 7905,0	-45,569377	+39,210881	+17,843792	63	243 7940,0	-41,184404	-45,729515	+13,908888	63
243 7905,5	-50,013771	+34,441505	+16,430278	63	243 7940,5	-35,840091	-49,246580	+15,622501	63
243 7906,0	-53,884205	+29,273538	+14,826407	63	243 7941,0	-30,084780	-52,186997	+17,153339	63
243 7906,5	-57,140950	+23,770465	+13,052459	63	243 7941,5	-23,980832	-54,508917	+18,481005	63
243 7907,0	-59,751301	+17,998268	+11,130167	63	243 7942,0	-17,595824	-56,175975	+19,586741	63
243 7907,5	-61,689664	+12,024773	+9,082491	63	243 7942,5	-11,002237	-57,157763	+20,453620	63
243 7908,0	-62,937564	+5,919037	+6,933401	63	243 7943,0	-4,277162	-57,430498	+21,066815	63
243 7908,5	-63,483611	-0,249256	+4,707642	63	243 7943,5	+2,498131	-56,977571	+21,413846	63
243 7909,0	-63,323479	-6,410335	+2,430539	63	243 7944,0	+9,238644	-55,790219	+21,484865	63
243 7909,5	-62,459698	-12,494870	+0,127785	63	243 7944,5	+15,856271	-53,868369	+21,273013	63
243 7910,0	-60,901603	-18,434454	-2,174739	63	243 7945,0	+22,260566	-51,221291	+20,774734	63
243 7910,5	-58,665197	-24,162040	-4,451135	63	243 7945,5	+28,359714	-47,868360	+19,990130	63
243 7911,0	-55,772924	-29,612332	-6,675648	63	243 7946,0	+34,061794	-43,839884	+18,923367	63
243 7911,5	-52,253705	-34,722234	-8,822831	63	243 7946,5	+39,276229	-39,177592	+17,582978	63
243 7912,0	-48,142675	-39,431185	-10,867682	63	243 7947,0	+43,915604	-33,935126	+15,982180	63
243 7912,5	-43,481191	-43,681571	-12,785805	63	243 7947,5	+47,897707	-28,178167	+14,139093	63
243 7913,0	-38,316733	-47,419141	-14,553573	63	243 7948,0	+51,147848	-21,984237	+12,076832	63
243 7913,5	-32,702879	-50,593469	-16,148291	63	243 7948,5	+53,601267	-15,441952	+9,823423	63
243 7914,0	-26,699231	-53,158439	-17,548387	63	243 7949,0	+55,205598	-8,649797	+7,411540	63
243 7914,5	-20,371369	-55,072855	-18,733649	63	243 7949,5	+55,923179	-1,714260	+4,877981	63
243 7915,0	-13,790755	-56,301064	-19,685450	63	243 7950,0	+55,732951	+5,252571	+2,262912	63
243 7915,5	-7,034568	-56,813749	-20,387063	63	243 7950,5	+54,631804	+12,135898	+0,391090	63
243 7916,0	-0,185453	-56,588784	-20,823986	63	243 7951,0	+52,635311	+18,821427	+3,040194	63
243 7916,5	+6,668926	-55,612257	-20,984372	63	243 7951,5	+49,777437	+25,198654	+5,640550	63
243 7917,0	+13,436504	-53,879372	-20,859384	63	243 7952,0	+46,109603	+31,164050	+8,149564	63
243 7917,5	+20,021734	-51,395682	-20,443752	63	243 7952,5	+41,698854	+36,623852	+10,527065	63
243 7918,0	+26,326809	-48,178050	-19,736193	63	243 7953,0	+36,625467	+41,496335	+12,736341	63
243 7918,5	+32,253220	-44,255598	-18,739906	63	243 7953,5	+30,980177	+45,713410	+14,744967	63
243 7919,0	+37,703717	-39,670463	-17,462984	63	243 7954,0	+24,861139	+49,221485	+16,525338	63
243 7919,5	+42,584615	-34,478219	-15,918758	63	243 7954,5	+18,371046	+51,981725	+18,054997	63
243 7920,0	+46,808359	-28,747822	-14,125967	63	243 7955,0	+11,614394	+53,969741	+19,316738	63
243 7920,5	+50,296298	-22,561017	-12,108751	63	243 7955,5	+4,695083	+55,174707	+20,298457	63
243 7921,0	+52,981422	-16,011120	-9,896420	63	243 7956,0	-2,285556	+55,598361	+20,992917	63
243 7921,5	+54,810891	-9,201136	-7,522936	63	243 7956,5	-9,230311	+55,253640	+21,397395	63
243 7922,0	+55,748231	-2,241289	-5,026187	63	243 7957,0	-16,047245	+54,163398	+21,513261	63
243 7922,5	+55,774771	+4,753930	-2,446998	63	243 7957,5	-22,650503	+52,359051	+21,345550	63
243 7923,0	+54,890431	+11,668978	+0,172003	63	243 7958,0	-28,960834	+49,879360	+20,902558	63
243 7923,5	+53,113641	+18,390575	+2,787594	63	243 7958,5	-34,905888	+46,769304	+20,195428	63
243 7924,0	+50,480402	+24,810792	+5,357185	63	243 7959,0	-40,420349	+43,079081	+19,237800	63
243 7924,5	+47,042774	+30,829820	+7,839951	63	243 7959,5	-45,445958	+38,863262	+18,045502	63
243 7925,0	+42,866648	+36,358139	+10,197801	63	243 7960,0	-49,931463	+34,180023	+16,636245	63
243 7925,5	+38,029299	+41,318159	+12,396173	63	243 7960,5	-53,832556	+29,090529	+15,029415	63
243 7926,0	+32,616755	+45,645163	+14,404584	63	243 7961,0	-57,111805	+23,658401	+13,245845	63

RECTANGULAR COORDINATES OF THE MOON 1952-1971

J.D.	x	y	z	J.D.	x	y	z		
243 7961,5	-59,738570	+17,949189	+11,307633	63	243 7996,5	-17,393527	-55,973054	-19,868504	63
243 7962,0	-61,688926	+12,029954	+9,237972	63	243 7997,0	-10,749775	-57,014913	-20,806223	63
243 7962,5	-62,945789	+5,968859	+7,061014	63	243 7997,5	-3,977951	-57,358045	-21,489735	63
243 7963,0	-63,498676	-0,165276	+4,801683	63	243 7998,0	+2,838494	-56,988882	-21,907026	63
243 7963,5	-63,343991	-6,303355	+2,485549	63	243 7998,5	+9,613466	-55,902496	-22,049120	63
243 7964,0	-62,484826	-12,376480	+0,138655	63	243 7999,0	+16,259226	-54,102949	-21,910311	63
243 7964,5	-60,931129	-18,316388	-2,212656	63	243 7999,5	+22,687473	-51,603726	-21,488405	63
243 7965,0	-58,699616	-24,055942	-4,541915	63	243 8000,0	+28,810500	-48,427859	-20,784866	63
243 7965,5	-55,813783	-29,529640	-6,822721	63	243 8000,5	+34,542404	-44,608081	-19,804983	63
243 7966,0	-52,303873	-34,674174	-9,028953	63	243 8001,0	+39,800351	-40,186766	-18,557938	63
243 7966,5	-48,206757	-39,428987	-11,134993	63	243 8001,5	+44,505891	-35,215762	-17,056876	63
243 7967,0	-43,565717	-43,736784	-13,115924	63	243 8002,0	+48,586272	-29,756075	-15,318867	63
243 7967,5	-38,430362	-47,544224	-14,947798	63	243 8002,5	+51,975809	-23,877384	-13,364861	63
243 7968,0	-32,856224	-50,802365	-16,607849	63	243 8003,0	+54,617198	-17,657378	-11,219540	63
243 7968,5	-26,904555	-53,467368	-18,074755	63	243 8003,5	+56,462880	-11,180916	-8,911105	63
243 7969,0	-20,641875	-55,501007	-19,328879	63	243 8004,0	+57,476260	-4,538973	-6,470992	63
243 7969,5	-14,139521	-56,871186	-20,352490	63	243 8004,5	+57,632910	+2,172638	-3,933488	63
243 7970,0	-7,473194	-57,552549	-21,130050	63	243 8005,0	+56,921641	+8,854762	-1,335240	63
243 7970,5	-0,722346	-57,527013	-21,648443	63	243 8005,5	+55,345288	+15,406641	+1,285322	63
243 7971,0	+6,030426	-56,784166	-21,897175	63	243 8006,0	+52,921308	+21,727863	+3,888678	63
243 7971,5	+12,700111	-55,321893	-21,868683	63	243 8006,5	+49,681926	+27,720421	+6,434995	63
243 7972,0	+19,200023	-53,146681	-21,558496	63	243 8007,0	+45,674020	+33,290949	+8,884967	63
243 7972,5	+25,442718	-50,274187	-20,965529	63	243 8007,5	+40,958407	+38,352902	+11,200718	63
243 7973,0	+31,340951	-46,729565	-20,092282	63	243 8008,0	+35,608703	+42,828616	+13,346670	63
243 7973,5	+36,808791	-42,547802	-18,945064	63	243 8008,5	+29,709717	+46,651199	+15,290391	63
243 7974,0	+41,762941	-37,774029	-17,534205	63	243 8009,0	+23,355435	+49,766038	+17,003340	63
243 7974,5	+46,124070	-32,463540	-15,874185	63	243 8009,5	+16,646714	+52,131915	+18,461482	63
243 7975,0	+49,818466	-26,681830	-13,983768	63	243 8010,0	+9,688763	+53,721608	+19,645719	63
243 7975,5	+52,779733	-20,504253	-11,886028	63	243 8010,5	+2,588582	+54,522018	+20,542160	63
243 7976,0	+54,950592	-14,015439	-9,608259	63	243 8011,0	-4,547471	+54,533724	+21,142150	63
243 7976,5	+56,284778	-7,308377	-7,181786	63	243 8011,5	-11,615933	+53,770255	+21,442182	63
243 7977,0	+56,748918	-0,483050	-4,641608	63	243 8012,0	-18,518139	+52,256918	+21,443616	63
243 7977,5	+56,324097	+6,355340	-2,025854	63	243 8012,5	-25,161783	+50,029409	+21,152277	63
243 7978,0	+55,007283	+13,098546	+0,624928	63	243 8013,0	-31,462079	+47,132372	+20,578009	63
243 7978,5	+52,812270	+19,637830	+3,268668	63	243 8013,5	-37,342535	+43,617850	+19,734150	63
243 7979,0	+49,769949	+25,866739	+5,862769	63	243 8014,0	-42,735393	+39,543802	+18,637003	63
243 7979,5	+45,928042	+31,683995	+8,365250	63	243 8014,5	-47,581827	+34,972814	+17,305381	63
243 7980,0	+41,350057	+36,996298	+10,735866	63	243 8015,0	-51,831845	+29,970844	+15,760101	63
243 7980,5	+36,113524	+41,720798	+12,937181	63	243 8015,5	-55,444050	+24,606178	+14,023582	63
243 7981,0	+30,307778	+45,787201	+14,935550	63	243 8016,0	-58,385406	+18,948632	+12,119531	63
243 7981,5	+24,031224	+49,139223	+16,701875	63	243 8016,5	-60,630801	+13,068794	+10,072593	63
243 7982,0	+17,388406	+51,735402	+18,212148	63	243 8017,0	-62,162697	+7,037472	+7,908149	63
243 7982,5	+10,487115	+53,549344	+19,447785	63	243 8017,5	-62,970797	+0,925527	+5,652095	63
243 7983,0	+3,435585	+54,569255	+20,395660	63	243 8018,0	-63,051692	+5,197846	+3,330688	63
243 7983,5	-3,659943	+54,797101	+21,047993	63	243 8018,5	-62,408714	-11,262711	+0,970417	63
243 7984,0	-10,697283	+54,247358	+21,402042	63	243 8019,0	-61,051668	-17,201375	-1,402124	63
243 7984,5	-17,579895	+52,945586	+21,459684	63	243 8019,5	-58,996755	-22,947275	-3,760325	63
243 7985,0	-24,218086	+50,926905	+21,226953	63	243 8020,0	-56,266523	-28,435529	-6,077680	63
243 7985,5	-30,529753	+48,234429	+20,713496	63	243 8020,5	-52,889828	-33,603235	-8,327886	63
243 7986,0	-36,440827	+44,917873	+19,932083	63	243 8021,0	-48,901936	-38,389860	-10,485009	63
243 7986,5	-41,885429	+41,032236	+18,898145	63	243 8021,5	-44,344498	-42,737658	-12,523612	63
243 7987,0	-46,805894	+36,636737	+17,629348	63	243 8022,0	-39,265587	-46,592171	-14,418965	63
243 7987,5	-51,152514	+31,793754	+16,145199	63	243 8022,5	-33,719713	-49,902849	-16,147270	63
243 7988,0	-54,883397	+26,568116	+14,466747	63	243 8023,0	-27,767725	-52,623704	-17,685911	63
243 7988,5	-57,964164	+21,026417	+12,616327	63	243 8023,5	-21,476646	-54,714088	-19,013781	63
243 7989,0	-60,367721	+15,236481	+10,617316	63	243 8024,0	-14,919345	-56,139455	-20,111578	63
243 7989,5	-62,073963	+9,266911	+8,493957	63	243 8024,5	-8,174108	-56,872282	-20,962201	63
243 7990,0	-63,069638	+3,186714	+6,271199	63	243 8025,0	-1,323961	-56,892820	-21,551103	63
243 7990,5	-63,348258	-2,935015	+3,974587	63	243 8025,5	+5,444145	-56,189954	-21,866668	63
243 7991,0	-62,909862	-9,029441	+1,630094	63	243 8026,0	+12,340373	-54,761924	-21,900589	63
243 7991,5	-61,761127	-15,028283	-0,735956	63	243 8026,5	+18,973196	-52,616866	-21,648166	63
243 7992,0	-59,915350	-20,864193	-3,097060	63	243 8027,0	+25,350797	-49,773338	-21,108632	63
243 7992,5	-57,392345	-26,471089	-5,426640	63	243 8027,5	+31,382546	-46,260459	-20,285321	63
243 7993,0	-54,218635	-31,784632	-7,698231	63	243 8028,0	+36,980639	-42,117977	-19,185849	63
243 7993,5	-50,427390	-36,742702	-9,885646	63	243 8028,5	+42,061688	-37,395952	-17,822127	63
243 7994,0	-46,058440	-41,285941	-11,963195	63	243 8029,0	+46,548304	-32,154272	-16,210297	63
243 7994,5	-41,158163	-45,358299	-13,905891	63	243 8029,5	+50,370747	-26,461966	-14,370632	63
243 7995,0	-35,779465	-48,907777	-15,689732	63	243 8030,0	+53,468197	-20,396145	-12,327236	63
243 7995,5	-29,981478	-51,887019	-17,291957	63	243 8030,5	+55,790149	-14,040914	-10,107746	63
243 7996,0	-23,829292	-54,254062	-18,691337	63	243 8031,0	+57,297415	-7,486004	-7,742898	63

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z	J.D.	x	y	z		
243 8031.5	+57,963047	- 0,825330	- 5,266063	63	243 8066.5	-15,744855	+53,734043	+21,792796	63
243 8032.0	+57,772945	+ 5,844595	- 2,712704	63	243 8067.0	-22,390099	+51,703298	+21,588725	63
243 8032.5	+56,726337	+12,426286	- 0,119777	63	243 8067.5	-28,747538	+48,994101	+21,101510	63
243 8033.0	+54,835867	+18,822970	+ 2,474869	63	243 8068.0	-34,738161	+45,650970	+20,341305	63
243 8033.5	+52,127539	+24,940268	+ 5,033161	63	243 8068.5	-40,289787	+41,725667	+19,321615	63
243 8034.0	+48,640461	+30,687917	+ 7,517463	63	243 8069.0	-45,337764	+37,276148	+18,058956	63
243 8034.5	+44,426139	+35,981352	+ 9,891245	63	243 8069.5	-49,825495	+32,365496	+16,572488	63
243 8035.0	+39,547709	+40,743318	+12,119761	63	243 8070.0	-53,704753	+27,060816	+14,883630	63
243 8035.5	+34,078780	+44,905267	+14,170671	63	243 8070.5	-56,935898	+21,432210	+13,015690	63
243 8036.0	+28,102073	+48,408645	+16,014652	63	243 8071.0	-59,487774	+15,551754	+10,993450	63
243 8036.5	+21,707844	+51,205943	+17,625928	63	243 8071.5	-61,337773	+ 9,492627	+ 8,842864	63
243 8037.0	+14,992111	+53,261511	+18,982745	63	243 8072.0	-62,471413	+ 3,328246	+ 6,590669	63
243 8037.5	+ 8,054722	+54,552023	+20,067688	63	243 8072.5	-62,882197	- 2,868435	+ 4,264126	63
243 8038.0	+ 0,997414	+55,066769	+20,867985	63	243 8073.0	-62,571165	- 9,025557	+1,890728	63
243 8038.5	- 6,078214	+54,807395	+21,375558	63	243 8073.5	-61,546561	-15,072862	- 0,502016	63
243 8039.0	-13,072570	+53,787543	+21,587064	63	243 8074.0	-59,823466	-20,942141	- 2,886788	63
243 8039.5	-19,889839	+52,032080	+21,503746	63	243 8074.5	-57,423446	-26,567592	- 5,236621	63
243 8040.0	-26,439510	+49,576089	+21,131182	63	243 8075.0	-54,374245	-31,886126	- 7,525048	63
243 8040.5	-32,637687	+46,463769	+20,478975	63	243 8075.5	-50,709483	-36,837615	- 9,726226	63
243 8041.0	-38,408053	+42,747067	+19,560331	63	243 8076.0	-46,468513	-41,365175	-11,815053	63
243 8041.5	-43,682616	+38,484417	+18,391624	63	243 8076.5	-41,696203	-45,415391	-13,767269	63
243 8042.0	-48,402135	+33,739392	+16,991934	63	243 8077.0	-36,442878	-48,938641	-15,559594	63
243 8042.5	-52,516339	+28,579463	+15,382594	63	243 8077.5	-30,764193	-51,889377	-17,169837	63
243 8043.0	-55,983852	+23,074808	+13,586719	63	243 8078.0	-24,721122	-54,226556	-18,577075	63
243 8043.5	-58,772088	+17,297330	+11,628845	63	243 8078.5	-18,379875	-55,914121	-19,761844	63
243 8044.0	-60,856903	+11,319742	+ 9,534523	63	243 8079.0	-11,811811	-56,921567	-20,706348	63
243 8044.5	-62,222291	+ 5,214837	+ 7,330051	63	243 8079.5	- 5,093270	-57,224599	-21,394743	63
243 8045.0	-62,859895	- 0,945126	+ 5,042172	63	243 8080.0	+ 1,694697	-56,805964	-21,813471	63
243 8045.5	-62,768714	- 7,088904	+ 2,697880	63	243 8080.5	+ 8,466749	-55,656216	-21,951587	63
243 8046.0	-61,954667	-13,146668	+ 0,324223	63	243 8081.0	+15,133908	-53,774728	-21,801214	63
243 8046.5	-60,430279	-19,050303	- 2,051836	63	243 8081.5	+21,604411	-51,170506	-21,357920	63
243 8047.0	-58,214457	-24,733680	- 4,403532	63	243 8082.0	+27,784919	-47,863198	-20,621202	63
243 8047.5	-55,332285	-30,132915	- 6,704422	63	243 8082.5	+33,581990	-43,883801	-19,594899	63
243 8048.0	-51,814856	-35,186557	- 8,928480	63	243 8083.0	+38,903838	-39,275178	-18,287538	63
243 8048.5	-47,699268	-39,835912	-11,050195	63	243 8083.5	+43,662473	-34,092394	-16,712626	63
243 8049.0	-43,028551	-44,025301	-13,044699	63	243 8084.0	+47,775917	-28,402468	-14,888767	63
243 8049.5	-37,851719	-47,702480	-14,887917	63	243 8084.5	+51,170648	-22,283830	-12,839657	63
243 8050.0	-32,223732	-50,819039	-16,556714	63	243 8085.0	+53,783860	-15,825091	-10,593801	63
243 8050.5	-26,205564	-53,331017	-18,029123	63	243 8085.5	+55,565669	- 9,123448	- 8,184104	63
243 8051.0	-19,864073	-55,199461	-19,284584	63	243 8086.0	+56,480901	- 2,282545	- 5,647191	63
243 8051.5	-13,271949	-56,391291	-20,304263	63	243 8086.5	+56,510376	+ 4,590003	- 3,022594	63
243 8052.0	- 6,507350	-56,880018	-21,071353	63	243 8087.0	+55,651607	+11,385366	- 0,351723	63
243 8052.5	+ 0,346468	-56,646756	-21,571508	63	243 8087.5	+53,918869	+17,995982	+ 2,323041	63
243 8053.0	+ 7,201861	-55,681083	-21,793222	63	243 8088.0	+51,342815	+24,318301	+ 4,959452	63
243 8053.5	+13,967670	-53,981989	-21,728263	63	243 8088.5	+47,968839	+30,256063	+ 7,516808	63
243 8054.0	+20,550395	-51,558710	-21,372101	63	243 8089.0	+43,855420	+35,721469	+ 9,956477	63
243 8054.5	+26,855632	-48,431501	-20,724316	63	243 8089.5	+39,073436	+40,635808	+12,242259	63
243 8055.0	+32,789733	-44,632024	-19,788895	63	243 8090.0	+33,703443	+44,931869	+14,341546	63
243 8055.5	+38,261705	-40,203639	-18,574500	63	243 8090.5	+27,832737	+48,555027	+16,225946	63
243 8056.0	+43,185240	-35,201246	-17,094590	63	243 8091.0	+21,553940	+51,462759	+17,871237	63
243 8056.5	+47,480758	-29,690755	-15,367393	63	243 8091.5	+14,963191	+53,624730	+19,257556	63
243 8057.0	+51,077386	-23,748162	-13,415722	63	243 8092.0	+ 8,158093	+55,022641	+20,369536	63
243 8057.5	+53,914889	-17,458321	-11,266684	63	243 8092.5	+ 1,236137	+55,649781	+21,196236	63
243 8058.0	+55,945156	-10,913268	- 8,951159	63	243 8093.0	- 5,706728	+55,510351	+21,731039	63
243 8058.5	+57,133471	- 4,210372	- 6,503208	63	243 8093.5	-12,577326	+54,618783	+21,971475	63
243 8059.0	+57,459380	+ 2,549709	- 3,959378	63	243 8094.0	-19,286330	+52,999008	+21,919045	63
243 8059.5	+56,917026	+ 9,265156	- 1,357913	63	243 8094.5	-25,749190	+50,683592	+21,578973	63
243 8060.0	+55,515258	+15,835099	+ 1,262042	63	243 8095.0	-31,886900	+47,712901	+20,959948	63
243 8060.5	+53,277111	+22,161599	+ 3,861226	63	243 8095.5	-37,626674	+44,134294	+20,073871	63
243 8061.0	+50,239233	+28,151529	+ 6,401040	63	243 8096.0	-42,902478	+40,001209	+18,935563	63
243 8061.5	+46,450719	+33,718171	+ 8,844251	63	243 8096.5	-47,655499	+35,372349	+17,562490	63
243 8062.0	+41,972006	+38,782650	+11,155631	63	243 8097.0	-51,834481	+30,310806	+15,974446	63
243 8062.5	+36,873414	+43,275080	+13,302525	63	243 8097.5	-55,395976	+24,883190	+14,193256	63
243 8063.0	+31,233721	+47,135548	+15,255339	63	243 8098.0	-58,304460	+19,158794	+12,242456	63
243 8063.5	+25,138500	+50,314703	+16,987920	63	243 8098.5	-60,532502	+13,208810	+10,147009	63
243 8064.0	+18,678599	+52,774325	+18,477888	63	243 8099.0	-62,060636	+ 7,105498	+ 7,932974	63
243 8064.5	+11,948493	+54,487504	+19,706869	63	243 8099.5	-62,877270	+ 0,921463	+5,627228	63
243 8065.0	+ 5,044718	+55,438807	+20,660670	63	243 8100.0	-62,978605	- 5,271047	+ 3,257195	63
243 8065.5	- 1,935705	+55,624051	+21,329344	63	243 8100.5	-62,368268	-11,400768	+ 0,850554	63
243 8066.0	- 8,896764	+55,050012	+21,707203	63	243 8101.0	-61,057191	-17,398036	- 1,564984	63

J.D.	x	y	z	J.D.	x	y	z		
243 8101,5	-59,063134	-23,195254	-3,961914	63	243 8136,5	+25,496308	-50,527271	-21,917883	63
243 8102,0	-56,410511	-28,727411	-6,313142	63	243 8137,0	+31,310478	-46,973300	-21,029575	63
243 8102,5	-53,129943	-33,932442	-8,592170	63	243 8137,5	+36,707788	-42,792747	-19,860720	63
243 8103,0	-49,258007	-38,751615	-10,773262	63	243 8138,0	+41,606026	-38,027452	-18,420470	63
243 8103,5	-44,836889	-43,129855	-12,831599	63	243 8138,5	+45,925873	-32,729403	-16,722191	63
243 8104,0	-39,914111	-47,016023	-14,743406	63	243 8139,0	+49,592490	-26,960953	-14,783684	63
243 8104,5	-34,542280	-50,363224	-16,486107	63	243 8139,5	+52,537310	-20,794776	-12,627336	63
243 8105,0	-28,778860	-53,129097	-18,038447	63	243 8140,0	+54,700064	-14,313558	-10,280173	63
243 8105,5	-22,685967	-55,276107	-19,380618	63	243 8140,5	+56,030930	-7,609231	-7,773743	63
243 8106,0	-16,330212	-56,771951	-20,494441	63	243 8141,0	+56,492675	-0,781734	-5,143830	63
243 8106,5	-9,782503	-57,589988	-21,363552	63	243 8141,5	+56,062711	+6,062754	-2,429936	63
243 8107,0	-3,117805	-57,709641	-21,973564	63	243 8142,0	+54,734750	+12,814084	+0,325454	63
243 8107,5	+3,585086	-57,117055	-22,312365	63	243 8142,5	+52,520077	+19,360893	+3,077853	63
243 8108,0	+10,243919	-55,805713	-22,370364	63	243 8143,0	+49,448093	+25,593636	+5,781899	63
243 8108,5	+16,773462	-53,777098	-22,140814	63	243 8143,5	+45,566107	+31,407805	+8,392624	63
243 8109,0	+23,086176	-51,041552	-21,620179	63	243 8144,0	+40,938261	+36,706993	+10,866761	63
243 8109,5	+29,093046	-47,618955	-20,808489	63	243 8144,5	+35,643789	+41,405738	+13,164000	63
243 8110,0	+34,704741	-43,539543	-19,709744	63	243 8145,0	+29,774431	+45,431708	+15,248062	63
243 8110,5	+39,833049	-38,844591	-18,332308	63	243 8145,5	+23,431592	+48,727388	+17,087617	63
243 8111,0	+44,392560	-33,586834	-16,689213	63	243 8146,0	+16,723085	+51,250868	+18,656873	63
243 8111,5	+48,302749	-27,830730	-14,798444	63	243 8146,5	+9,760031	+52,976040	+19,935916	63
243 8112,0	+51,490212	-21,652249	-12,683049	63	243 8147,0	+2,653881	+53,892117	+20,910793	63
243 8112,5	+53,891054	-15,138214	-10,371088	63	243 8147,5	-4,486181	+54,002644	+21,573341	63
243 8113,0	+55,453327	-8,385103	-7,895366	63	243 8148,0	-11,555348	+53,324117	+21,920846	63
243 8113,5	+56,139333	-1,497274	-5,292969	63	243 8148,5	-18,454873	+51,884535	+21,955596	63
243 8114,0	+55,927425	+5,415374	-2,604494	63	243 8149,0	-25,093273	+49,721717	+21,684368	63
243 8114,5	+54,813476	+12,240173	+0,126890	63	243 8149,5	-31,387097	+46,881747	+21,117851	63
243 8115,0	+52,811492	+18,864773	+2,856569	63	243 8150,0	-37,261407	+43,417478	+20,270143	63
243 8115,5	+49,953478	+25,180293	+5,539740	63	243 8150,5	-42,649966	+39,387221	+19,158218	63
243 8116,0	+46,288607	+31,084397	+8,132638	63	243 8151,0	-47,495256	+34,853525	+17,801486	63
243 8116,5	+41,881529	+36,483981	+10,593749	63	243 8151,5	-51,748276	+29,882153	+16,221354	63
243 8117,0	+36,810169	+41,297393	+12,884834	63	243 8152,0	-55,368437	+24,541248	+14,440905	63
243 8117,5	+31,163141	+45,456024	+14,971784	63	243 8152,5	-58,323249	+18,900560	+12,484558	63
243 8118,0	+25,036932	+48,905256	+16,825215	63	243 8153,0	-60,588059	+13,030809	+10,377818	63
243 8118,5	+18,533176	+51,604866	+18,420864	63	243 8153,5	-62,145872	+7,003155	+8,147032	63
243 8119,0	+11,756007	+53,528794	+19,739721	63	243 8154,0	-62,987032	+0,888673	+5,819166	63
243 8119,5	+4,809747	+54,664578	+20,768011	63	243 8154,5	-63,109138	-5,242067	+3,421630	63
243 8120,0	-2,203097	+55,012409	+21,497004	63	243 8155,0	-62,516724	-11,319464	+0,982081	63
243 8120,5	-9,183444	+54,584142	+21,922769	63	243 8155,5	-61,221193	-17,275294	-1,471757	63
243 8121,0	-16,036934	+53,401981	+22,045776	63	243 8156,0	-59,240587	-23,043130	-3,912253	63
243 8121,5	-22,674904	+51,497379	+21,870563	63	243 8156,5	-56,599421	-28,558738	-6,312073	63
243 8122,0	-29,015118	+48,909845	+21,405337	63	243 8157,0	-53,328570	-33,760568	-8,644346	63
243 8122,5	-34,982257	+45,685820	+20,661582	63	243 8157,5	-49,464985	-38,590127	-10,882855	63
243 8123,0	-40,508253	+41,877639	+19,653681	63	243 8158,0	-45,051529	-42,992469	-13,002240	63
243 8123,5	-45,532547	+37,542642	+18,398613	63	243 8158,5	-40,136722	-46,916654	-14,978212	63
243 8124,0	-50,002168	+32,742267	+16,915595	63	243 8159,0	-34,774401	-50,316167	-16,787725	63
243 8124,5	-53,871797	+27,541275	+15,225795	63	243 8159,5	-29,023427	-53,149415	-18,409209	63
243 8125,0	-57,103850	+22,007052	+13,352073	63	243 8160,0	-22,947261	-55,380111	-19,822770	63
243 8125,5	-59,668352	+16,208886	+11,318691	63	243 8160,5	-16,613537	-56,977671	-21,010361	63
243 8126,0	-61,543037	+10,217362	+9,151075	63	243 8161,0	-10,093639	-57,917690	-21,956030	63
243 8126,5	-62,713148	+4,103720	+6,875570	63	243 8161,5	-3,462173	-58,182255	-22,646071	63
243 8127,0	-63,171429	-2,060729	+4,519196	63	243 8162,0	+3,203577	-57,760355	-23,069250	63
243 8127,5	-62,917890	-8,205173	+2,109419	63	243 8162,5	+9,824231	-56,648179	-23,216967	63
243 8128,0	-61,959804	-14,259851	-0,326072	63	243 8163,0	+16,318927	-54,849445	-23,083441	63
243 8128,5	-60,311337	-20,156577	-2,759575	63	243 8163,5	+22,606029	-52,375753	-22,665911	63
243 8129,0	-57,993473	-25,829246	-5,163615	63	243 8164,0	+28,603840	-49,246832	-21,964809	63
243 8129,5	-55,033758	-31,214352	-7,511132	63	243 8164,5	+34,231434	-45,490808	-20,983931	63
243 8130,0	-51,465925	-36,251399	-9,775699	63	243 8165,0	+39,409566	-41,144446	-19,730619	63
243 8130,5	-47,329745	-40,883410	-11,931723	63	243 8165,5	+44,061674	-36,253308	-18,215926	63
243 8131,0	-42,670568	-45,057264	-13,954615	63	243 8166,0	+48,115075	-30,871896	-16,454761	63
243 8131,5	-37,539078	-48,724124	-15,820981	63	243 8166,5	+51,502215	-25,063601	-14,466001	63
243 8132,0	-31,990933	-51,839800	-17,508795	63	243 8167,0	+54,162064	-18,900519	-12,272529	63
243 8132,5	-26,086410	-54,365057	-18,997548	63	243 8167,5	+56,041716	-12,463096	-9,901253	63
243 8133,0	-19,890087	-56,266018	-20,268429	63	243 8168,0	+57,097981	-5,839443	-7,382964	63
243 8133,5	-13,470471	-57,514425	-21,304470	63	243 8168,5	+57,299044	+0,875625	-4,752131	63
243 8134,0	-6,899673	-58,088053	-22,090736	63	243 8169,0	+56,626141	+7,581933	-2,046499	63
243 8134,5	-0,253020	-57,971082	-22,614491	63	243 8169,5	+55,075014	+14,175702	+0,693456	63
243 8135,0	+6,391322	-57,154442	-22,865378	63	243 8170,0	+52,657093	+20,551670	+3,425256	63
243 8135,5	+12,952813	-55,636309	-22,835663	63	243 8170,5	+49,400322	+26,605580	+6,105332	63
243 8136,0	+19,349030	-53,422550	-22,520431	63	243 8171,0	+45,349318	+32,236878	+8,690071	63

RECTANGULAR COORDINATES OF THE MOON 1952-1971

63

J.D.	x	y	z
243 8171,5	+40,564998	+37,351567	+11,136968
243 8172,0	+35,123379	+41,864904	+13,405800
243 8172,5	+29,113808	+45,703925	+15,459790
243 8173,0	+22,636468	+48,809422	+17,266589
243 8173,5	+15,799528	+51,137400	+18,799130
243 8174,0	+ 8,716005	+52,659799	+20,036184
243 8174,5	+ 1,500583	+53,364528	+20,962651
243 8175,0	- 5,733335	+53,254843	+21,569603
243 8175,5	-12,876272	+52,348298	+21,854087
243 8176,0	-19,824847	+50,675130	+21,818693
243 8176,5	-26,483451	+48,276622	+21,471060
243 8177,0	-32,765367	+45,203154	+20,823211
243 8177,5	-38,593527	+41,512521	+19,890949
243 8178,0	-43,900787	+37,268195	+18,693216
243 8178,5	-48,629929	+32,537817	+17,251481
243 8179,0	-52,733479	+27,391941	+15,589246
243 8179,5	-56,173294	+21,902896	+13,731548
243 8180,0	-58,920164	+16,143917	+11,704596
243 8180,5	-60,953384	+10,188431	+ 9,535439
243 8181,0	-62,260191	+ 4,109422	+ 7,251680
243 8181,5	-62,835392	- 2,020990	+ 4,881257
243 8182,0	-62,681030	- 8,131975	+ 2,452269
243 8182,5	-61,805979	-14,154302	- 0,007196
243 8183,0	-60,225765	-20,020688	- 2,469206
243 8183,5	-57,962253	-25,666065	- 4,906123
243 8184,0	-55,043528	-31,027907	- 7,290748
243 8184,5	-51,503675	-36,046554	- 9,596445
243 8185,0	-47,382690	-40,665581	-11,797323
243 8185,5	-42,726265	-44,832206	-13,868384
243 8186,0	-37,585580	-48,497641	-15,785716
243 8186,5	-32,017186	-51,617683	-17,526708
243 8187,0	-26,082602	-54,153064	-19,070240
243 8187,5	-19,848070	-56,070054	-20,396934
243 8188,0	-13,384079	-57,340904	-21,489388
243 8188,5	- 6,764892	-57,944364	-22,332401
243 8189,0	- 0,067953	-57,866156	-22,913243
243 8189,5	+ 6,626768	-57,099401	-23,221853
243 8190,0	+13,237540	-55,645011	-23,251095
243 8190,5	+19,681681	-53,512002	-22,996929
243 8191,0	+25,876461	-50,717756	-22,458617
243 8191,5	+31,740085	-47,288211	-21,638877
243 8192,0	+37,192650	-43,257856	-20,543986
243 8192,5	+42,152777	-38,669815	-19,183888
243 8193,0	+46,561198	-33,575672	-17,572265
243 8193,5	+50,336878	-28,035232	-15,726514
243 8194,0	+53,423224	-22,116169	-13,667741
243 8194,5	+55,766799	-15,893529	-11,420668
243 8195,0	+57,323026	- 9,449048	- 9,013473
243 8195,5	+58,057409	- 2,870323	- 6,477585
243 8196,0	+57,946679	+ 3,750258	- 3,847363
243 8196,5	+56,979955	+10,316774	- 1,159702
243 8197,0	+55,159597	+16,731281	+ 1,546479
243 8197,5	+52,502035	+22,895554	+ 4,230849
243 8198,0	+49,038244	+28,713051	+ 6,852396
243 8198,5	+44,813806	+34,091011	+ 9,370254
243 8199,0	+39,888637	+38,942691	+11,744609
243 8199,5	+34,336159	+43,189580	+13,937651
243 8200,0	+28,241973	+46,763487	+15,914524
243 8200,5	+21,702057	+49,608404	+17,644222
243 8201,0	+14,820495	+51,681996	+19,100397
243 8201,5	+ 7,706879	+52,956532	+20,261961
243 8202,0	+ 0,473565	+53,419407	+21,113550
243 8202,5	- 6,767137	+53,072966	+21,645715
243 8203,0	-13,905621	+51,933926	+21,854929
243 8203,5	-20,837342	+50,032152	+21,743341
243 8204,0	-27,464834	+47,409262	+21,318387
243 8204,5	-33,699222	+44,116875	+20,592257
243 8205,0	-39,461318	+40,214830	+19,581282
243 8205,5	-44,682277	+35,769384	+18,305283
243 8206,0	-49,303799	+30,851478	+16,786910

J.D.	x	y	z
243 8206,5	-53,278153	+25,535254	+15,051055
243 8207,0	-56,567741	+19,896633	+13,124244
243 8207,5	-59,144797	+14,012279	+11,034216
243 8208,0	-60,990701	+ 7,958604	+ 8,809452
243 8208,5	-62,095459	+1,811082	+ 6,478858
243 8209,0	-62,457114	- 4,356330	+ 4,071495
243 8209,5	-62,081173	-10,471638	+1,616331
243 8210,0	-60,980124	-16,465135	- 0,857917
243 8210,5	-59,173069	-22,269681	- 3,322936
243 8211,0	-56,685324	-27,820934	- 5,750933
243 8211,5	-53,548151	-33,057558	- 8,114757
243 8212,0	-49,798570	-37,921461	-10,388001
243 8212,5	-45,479200	-42,358088	-12,545133
243 8213,0	-40,638001	-46,316612	-14,561599
243 8213,5	-35,328278	-49,750432	-16,414015
243 8214,0	-29,608401	-52,617428	-18,080298
243 8214,5	-23,541691	-54,880535	-19,539899
243 8215,0	-17,196119	-56,508159	-20,773995
243 8215,5	-10,644003	-57,474803	-21,765770

Epoch 1964.0

J.D.	x	y	z
243 8207,0	-56,573461	+19,883989	+13,118748
243 8207,5	-59,148999	+13,999060	+11,028469
243 8208,0	-60,993334	+ 7,944972	+ 8,803526
243 8208,5	-62,096492	+1,797203	+ 6,472825
243 8209,0	-62,456535	- 4,370289	+ 4,065427
243 8209,5	-62,078987	-10,485513	+1,610299
243 8210,0	-60,976358	-16,478764	- 0,863842
243 8210,5	-59,167767	-22,282906	- 3,328685
243 8211,0	-56,678545	-27,833603	- 5,756440
243 8211,5	-53,539972	-33,069525	- 8,119959
243 8212,0	-49,789084	-37,932590	-10,392839
243 8212,5	-45,468512	-42,368252	-12,549551
243 8213,0	-40,626233	-46,325694	-14,565546
243 8213,5	-35,315562	-49,758327	-16,417447
243 8214,0	-29,594883	-52,624045	-18,083173
243 8214,5	-23,527525	-54,885796	-19,542185
243 8215,0	-17,181470	-56,512001	-20,775664
243 8215,5	-10,629041	-57,477181	-21,766803
243 8216,0	- 3,946456	-57,762439	-22,501033
243 8216,5	+ 2,786736	-57,356077	-22,966321
243 8217,0	+ 9,488315	-56,254169	-23,153459
243 8217,5	+16,074226	-54,461057	-23,056339
243 8218,0	+22,459536	-51,989731	-22,672193
243 8218,5	+28,559514	-48,862254	-22,001860
243 8219,0	+34,290783	-45,109814	-21,049910
243 8219,5	+39,572667	-40,772888	-19,824846
243 8220,0	+44,328460	-35,901025	-18,339125
243 8220,5	+48,486772	-30,552493	-16,609154
243 8221,0	+51,982923	-24,793838	-14,655231
243 8221,5	+54,760188	-18,699105	-12,501376
243 8222,0	+56,771004	-12,348963	-10,175081
243 8222,5	+57,978105	- 5,829665	- 7,706999
243 8223,0	+58,355449	+ 0,768186	- 5,130564
243 8223,5	+57,889030	+ 7,350986	- 2,481517
243 8224,0	+56,577519	+13,823591	+ 0,202613
243 8224,5	+54,432676	+20,090900	+ 2,883092
243 8225,0	+51,479475	+26,059483	+ 5,520609
243 8225,5	+47,756170	+31,639321	+ 8,075970
243 8226,0	+43,313808	+36,745480	+10,510802
243 8226,5	+38,215719	+41,299851	+12,788280
243 8227,0	+32,536517	+45,232767	+14,873876
243 8227,5	+26,360889	+48,484542	+16,736060
243 8228,0	+19,782009	+51,006757	+18,346987
243 8228,5	+12,899734	+52,763332	+19,683056
243 8229,0	+ 5,818572	+53,731374	+20,725466
243 8229,5	- 1,354536	+53,901447	+21,460506
243 8230,0	- 8,512478	+53,277737	+21,879849
243 8230,5	-15,550181	+51,877535	+21,980547
243 8231,0	-22,366742	+49,730600	+21,764972

J.D.	x	y	z	J.D.	x	y	z		
243 8231,5	-28,867312	+46,878061	+21,240566	64	243 8266,5	-50,976786	-36,334074	-9,801635	64
243 8232,0	-34,964646	+43,370977	+20,419416	64	243 8267,0	-46,897168	-40,957011	-12,016132	64
243 8232,5	-40,580427	+39,268955	+19,317819	64	243 8267,5	-42,284825	-45,109282	-14,092269	64
243 8233,0	-45,646079	+34,638412	+17,955688	64	243 8268,0	-37,191534	-48,743957	-16,006537	64
243 8233,5	-50,103365	+29,551043	+16,355984	64	243 8268,5	-31,673547	-51,818759	-17,736857	64
243 8234,0	-53,904546	+24,082201	+14,544098	64	243 8269,0	-25,791340	-54,296185	-19,262671	64
243 8234,5	-57,012290	+18,309469	+12,547275	64	243 8269,5	-19,609508	-56,143887	-20,565082	64
243 8235,0	-59,399454	+12,311410	+10,394105	64	243 8270,0	-13,196514	-57,334877	-21,626980	64
243 8235,5	-61,048490	+6,166444	+8,114012	64	243 8270,5	-6,624554	-57,847939	-22,433216	64
243 8236,0	-61,951059	+0,048036	+5,736880	64	243 8271,0	+0,030699	-57,668134	-22,970816	64
243 8236,5	-62,107236	-6,256407	+3,292671	64	243 8271,5	+6,690410	-56,787256	-23,229213	64
243 8237,0	-61,525012	-12,385392	+0,811171	64	243 8272,0	+13,272991	-55,204526	-23,200552	64
243 8237,5	-60,219621	-18,364460	-1,678254	64	243 8272,5	+19,694692	-52,927106	-22,879949	64
243 8238,0	-58,213068	-24,126192	-4,146833	64	243 8273,0	+25,870352	-49,970860	-22,265873	64
243 8238,5	-55,533562	-29,606480	-6,566526	64	243 8273,5	+31,714379	-46,360929	-21,360456	64
243 8239,0	-52,215207	-34,744778	-8,910157	64	243 8274,0	+37,141934	-42,132240	-20,169816	64
243 8239,5	-48,297604	-39,484235	-11,151498	64	243 8274,5	+42,070362	-37,329908	-18,704351	64
243 8240,0	-43,825611	-43,771880	-13,265363	64	243 8275,0	+46,420878	-32,009432	-16,978962	64
243 8240,5	-38,849162	-47,558860	-15,227733	64	243 8275,5	+50,120355	-26,236533	-15,013163	64
243 8241,0	-33,423052	-50,800624	-17,015826	64	243 8276,0	+53,103246	-20,086692	-12,831075	64
243 8241,5	-27,606848	-53,457289	-18,608282	64	243 8276,5	+55,313617	-13,644342	-10,461276	64
243 8242,0	-21,464679	-55,493918	-19,985271	64	243 8277,0	+56,706885	-7,001528	-7,936448	64
243 8242,5	-15,065121	-56,881076	-21,128725	64	243 8277,5	+57,251615	-0,256307	-5,292882	64
243 8243,0	-8,480922	-57,595206	-22,022533	64	243 8278,0	+56,930686	+6,489287	-2,569782	64
243 8243,5	-1,788688	-57,619234	-22,652783	64	243 8278,5	+55,742225	+13,131475	+0,191546	64
243 8244,0	+4,931530	-56,943230	-23,008086	64	243 8279,0	+53,700037	+19,567170	+2,948613	64
243 8244,5	+11,596828	-55,564998	-23,079853	64	243 8279,5	+50,833335	+25,696341	+5,658748	64
243 8245,0	+18,122208	-53,490683	-22,862610	64	243 8280,0	+47,186122	+31,424334	+8,280050	64
243 8245,5	+24,421489	-50,735395	-22,354340	64	243 8280,5	+42,816070	+36,663979	+10,772350	64
243 8246,0	+30,408443	-47,323678	-21,556755	64	243 8281,0	+37,792950	+41,337315	+13,098048	64
243 8246,5	+35,998075	-43,289839	-20,475568	64	243 8281,5	+32,196872	+45,377036	+15,222847	64
243 8247,0	+41,108118	-38,678145	-19,120695	64	243 8282,0	+26,116263	+48,727480	+17,116331	64
243 8247,5	+45,660599	-33,542730	-17,506369	64	243 8282,5	+19,645885	+51,345351	+18,752454	64
243 8248,0	+49,583499	-27,947255	-15,651160	64	243 8283,0	+12,884740	+53,199959	+20,109816	64
243 8248,5	+52,812449	-21,964274	-13,577878	64	243 8283,5	+5,934127	+54,273237	+21,171849	64
243 8249,0	+55,292258	-15,674291	-11,313349	64	243 8284,0	-1,104215	+54,559482	+21,926894	64
243 8249,5	+56,978439	-9,164562	-8,888071	64	243 8284,5	-8,129776	+54,064871	+22,368160	64
243 8250,0	+57,838382	-2,527615	-6,335737	64	243 8285,0	-15,044812	+52,806790	+22,493591	64
243 8250,5	+57,852391	+4,140391	-3,692691	64	243 8285,5	-21,755711	+50,813107	+22,305713	64
243 8251,0	+57,014277	+10,741485	-0,997247	64	243 8286,0	-28,174173	+48,121256	+21,811378	64
243 8251,5	+55,331757	+17,177766	+1,711011	64	243 8286,5	-34,218231	+44,777266	+21,021448	64
243 8252,0	+52,826359	+23,532777	+4,391987	64	243 8287,0	-39,813151	+40,834792	+19,950530	64
243 8252,5	+49,533096	+29,175842	+7,005837	64	243 8287,5	-44,892088	+36,353996	+18,616549	64
243 8253,0	+45,499875	+34,558818	+9,513703	64	243 8288,0	-49,396642	+31,400480	+17,040400	64
243 8253,5	+40,786498	+39,422652	+11,878446	64	243 8288,5	-53,277312	+26,044252	+15,245573	64
243 8254,0	+35,463524	+43,696302	+14,065304	64	243 8289,0	-56,493704	+20,358571	+13,257702	64
243 8254,5	+29,610927	+47,318467	+16,042509	64	243 8289,5	-59,014612	+14,418912	+11,104166	64
243 8255,0	+23,316554	+50,238551	+17,781812	64	243 8290,0	-60,818060	+8,301961	+8,813684	64
243 8255,5	+16,674473	+52,417407	+19,258931	64	243 8290,5	-61,891099	+2,084636	+6,415911	64
243 8256,0	+9,783251	+53,827901	+20,453937	64	243 8291,0	-62,229556	-4,156811	+3,941056	64
243 8256,5	+2,744180	+54,455190	+21,351535	64	243 8291,5	-61,837674	-10,347587	+1,419525	64
243 8257,0	-4,340571	+54,296687	+21,941215	64	243 8292,0	-60,727667	-16,415092	+1,118415	64
243 8257,5	-11,369686	+53,361926	+22,217362	64	243 8292,5	-58,919218	-22,289526	+3,642914	64
243 8258,0	-18,244476	+51,672102	+22,179244	64	243 8293,0	-56,438999	-27,904418	+6,124817	64
243 8258,5	-24,870459	+49,259340	+21,830863	64	243 8293,5	-53,320102	-33,197064	-8,535870	64
243 8259,0	-31,158862	+46,165876	+21,180771	64	243 8294,0	-49,601546	-38,108880	-10,848927	64
243 8259,5	-37,027897	+42,442946	+20,241741	64	243 8294,5	-45,327750	-42,585681	-13,038092	64
243 8260,0	-42,403870	+38,149628	+19,030423	64	243 8295,0	-40,548048	-46,577873	-15,078863	64
243 8260,5	-47,221964	+33,351479	+17,566871	64	243 8295,5	-35,316330	-50,040697	-16,948241	64
243 8261,0	-51,426892	+28,119248	+15,874082	64	243 8296,0	-29,690626	-52,934371	-18,624843	64
243 8261,5	-54,973221	+22,527485	+13,977490	64	243 8296,5	-23,732774	-55,224234	-20,088985	64
243 8262,0	-57,825471	+16,653250	+11,904453	64	243 8297,0	-17,508153	-56,880946	-21,322798	64
243 8262,5	-59,958036	+10,574880	+9,683757	64	243 8297,5	-11,085413	-57,880694	-22,310327	64
243 8263,0	-61,354874	+4,370872	+7,345146	64	243 8298,0	-4,536233	-58,205435	-23,037659	64
243 8263,5	-62,009128	-1,881083	+4,918892	64	243 8298,5	+2,064922	-57,843296	-23,493109	64
243 8264,0	-61,922633	-8,104952	+2,435433	64	243 8299,0	+8,641109	-56,788793	-23,667338	64
243 8264,5	-61,105293	-14,227037	-0,074987	64	243 8299,5	+15,113220	-55,043430	-23,553623	64
243 8265,0	-59,574574	-20,176567	-2,582568	64	243 8300,0	+21,400446	-52,616118	-23,148073	64
243 8265,5	-57,354798	-25,886106	-5,058198	64	243 8300,5	+27,420841	-49,523751	-22,449911	64
243 8266,0	-54,476663	-31,291875	-7,473626	64	243 8301,0	+33,092062	-45,791805	-21,461793	64

RECTANGULAR COORDINATES OF THE MOON 1952-1971

65

J.D.	x	y	z	J.D.	x	y	z		
243 8301,5	+38,332306	-41,454851	-20,190096	64	243 8336,5	+27,895872	+45,909418	+16,210245	64
243 8302,0	+43,061502	-36,557089	-18,645248	64	243 8337,0	+21,336283	+48,875360	+18,037441	64
243 8302,5	+47,202755	-31,152708	-16,842013	64	243 8337,5	+14,437049	+51,050829	+19,573364	64
243 8303,0	+50,683969	-25,306019	-14,799688	64	243 8338,0	+7,313109	+52,410883	+20,796989	64
243 8303,5	+53,439755	-19,091331	-12,542233	64	243 8338,5	+0,080258	+52,946740	+21,693814	64
243 8304,0	+55,413503	-12,592470	-10,098269	64	243 8339,0	-7,147773	+52,664872	+22,255750	64
243 8304,5	+56,559407	-5,901794	-7,500872	64	243 8339,5	-14,261813	+51,585805	+22,480883	64
243 8305,0	+56,844615	+0,881196	-4,787191	64	243 8340,0	-21,159246	+49,742390	+22,372951	64
243 8305,5	+56,250907	+7,651811	-1,997837	64	243 8340,5	-27,745514	+47,178163	+21,940801	64
243 8306,0	+54,776169	+14,302504	+0,823938	64	243 8341,0	-33,935118	+43,945473	+21,197747	64
243 8306,5	+52,435258	+20,725585	+3,633260	64	243 8341,5	-39,652226	+40,103823	+20,160927	64
243 8307,0	+49,260190	+26,816081	+6,384761	64	243 8342,0	-44,830932	+35,718258	+18,850687	64
243 8307,5	+45,299640	+32,474639	+9,033802	64	243 8342,5	-49,415273	+30,857980	+17,289999	64
243 8308,0	+40,617687	+37,610172	+11,537660	64	243 8343,0	-53,359094	+25,595129	+15,503972	64
243 8308,5	+35,292090	+42,142257	+13,856659	64	243 8343,5	-56,625723	+20,003694	+13,519366	64
243 8309,0	+29,411881	+46,002906	+15,955098	64	243 8344,0	-59,187634	+14,158632	+11,364202	64
243 8309,5	+23,074798	+49,137842	+17,802013	64	243 8344,5	-61,026084	+8,135105	+9,067422	64
243 8310,0	+16,384586	+51,507240	+19,371721	64	243 8345,0	-62,130714	+2,007817	+6,658583	64
243 8310,5	+9,448237	+53,085715	+20,644072	64	243 8345,5	-62,499143	+4,149555	+6,167579	64
243 8311,0	+2,373559	+53,862131	+21,604594	64	243 8346,0	-62,136680	-10,264876	+1,624417	64
243 8311,5	-4,733111	+53,838714	+22,244350	64	243 8346,5	-61,055893	-16,268019	+0,941021	64
243 8312,0	-11,768787	+53,030193	+22,559766	64	243 8347,0	-59,276403	-22,091311	+3,499184	64
243 8312,5	-18,635395	+51,462501	+22,552253	64	243 8347,5	-56,824432	-27,669946	+6,021051	64
243 8313,0	-25,241021	+49,171620	+22,227847	64	243 8348,0	-53,732540	-32,942394	+8,478332	64
243 8313,5	-31,500851	+46,202253	+21,596777	64	243 8348,5	-50,039281	-37,850810	+10,843669	64
243 8314,0	-37,337863	+42,606593	+20,673017	64	243 8349,0	-45,788815	-42,341404	+13,090814	64
243 8314,5	-42,683296	+38,443106	+19,473848	64	243 8349,5	-41,030561	-46,364812	+15,194829	64
243 8315,0	-47,476981	+33,775424	+18,019434	64	243 8350,0	-35,818748	-49,876434	+17,132254	64
243 8315,5	-51,667483	+28,671267	+16,332405	64	243 8350,5	-30,212078	-52,836838	+18,881316	64
243 8316,0	-55,212197	+23,201498	+14,437494	64	243 8351,0	-24,273153	-55,211925	+20,422033	64
243 8316,5	-58,077286	+17,439173	+12,361127	64	243 8351,5	-18,068097	-56,973337	+21,736444	64
243 8317,0	-60,237687	+11,458739	+10,131131	64	243 8352,0	-11,666028	-58,098625	+22,808700	64
243 8317,5	-61,676881	+5,335206	+7,776355	64	243 8352,5	-5,138578	-58,571488	+23,625227	64
243 8318,0	-62,386697	+0,856587	+5,326364	64	243 8353,0	+1,440623	-58,382013	+24,174874	64
243 8318,5	-62,367231	-7,042665	+2,811145	64	243 8353,5	+7,996462	-57,526742	+24,448990	64
243 8319,0	-61,626339	-13,150597	+0,260800	64	243 8354,0	+14,452877	-56,009000	+24,441615	64
243 8319,5	-60,179453	-19,110091	-2,294731	64	243 8354,5	+20,733369	-53,838902	+24,149517	64
243 8320,0	-58,049184	-24,853574	-4,825923	64	243 8355,0	+26,761615	-51,033627	+23,572392	64
243 8320,5	-55,264884	-30,316711	-7,303930	64	243 8355,5	+32,462016	-47,617450	+22,712898	64
243 8321,0	-51,862201	-35,438838	-9,700809	64	243 8356,0	+37,760372	-43,621998	+21,576857	64
243 8321,5	-47,882693	-40,163447	-11,989723	64	243 8356,5	+42,584538	-39,086292	+20,173310	64
243 8322,0	-43,373237	-44,438430	-14,145139	64	243 8357,0	+46,865291	-34,056975	+18,514716	64
243 8322,5	-38,385680	-48,216506	-16,142990	64	243 8357,5	+50,537101	-28,588278	+16,616996	64
243 8323,0	-32,976301	-51,455411	-17,960839	64	243 8358,0	+53,539284	-22,742168	+14,499734	64
243 8323,5	-27,205353	-54,118124	-19,577979	64	243 8358,5	+55,817063	-16,588204	+12,186188	64
243 8324,0	-21,136674	-56,173108	-20,975602	64	243 8359,0	+57,322869	-10,203317	+9,703360	64
243 8324,5	-14,837225	-57,594425	-22,136865	64	243 8359,5	+58,017856	-3,671429	+7,081965	64
243 8325,0	-8,376750	-58,362016	-23,047051	64	243 8360,0	+57,873315	+2,917273	+4,356273	64
243 8325,5	-1,827365	-58,461749	-23,693625	64	243 8360,5	+56,872321	+9,467340	+1,563874	64
243 8326,0	+4,736795	-57,885777	-24,066421	64	243 8361,0	+55,011223	+15,879424	+1,254763	64
243 8326,5	+11,239942	-56,632616	-24,157703	64	243 8361,5	+52,301084	+22,052105	+4,056878	64
243 8327,0	+17,605041	-54,707576	-23,962380	64	243 8362,0	+48,768702	+27,884054	+6,798234	64
243 8327,5	+23,754242	-52,122934	-23,478121	64	243 8362,5	+44,457279	+33,276579	+9,434073	64
243 8328,0	+29,609386	-48,898359	-22,705573	64	243 8363,0	+39,426489	+38,136445	+11,920291	64
243 8328,5	+35,092622	-45,061279	-21,648582	64	243 8363,5	+33,751753	+42,378684	+14,214659	64
243 8329,0	+40,127113	-40,647251	-20,314392	64	243 8364,0	+27,522894	+45,929449	+16,278117	64
243 8329,5	+44,638001	-35,700380	-18,713933	64	243 8364,5	+20,841897	+48,728369	+18,075966	64
243 8330,0	+48,553442	-30,273612	-16,862015	64	243 8365,0	+13,820164	+50,730533	+19,578950	64
243 8330,5	+51,805984	-24,428973	-14,777586	64	243 8365,5	+6,575206	+51,907653	+20,764055	64
243 8331,0	+54,334038	-18,237590	-12,483851	64	243 8366,0	-0,772801	+52,248522	+21,615030	64
243 8331,5	+56,083611	-11,779486	-10,008375	64	243 8366,5	-8,104435	+51,758643	+22,122560	64
243 8332,0	+57,010268	-5,143040	-7,383040	64	243 8367,0	-15,304197	+50,459292	+22,284199	64
243 8332,5	+57,081006	+1,575970	-4,643831	64	243 8367,5	-22,263172	+48,385868	+22,103945	64
243 8333,0	+56,276264	+8,275798	-1,830439	64	243 8368,0	-28,881162	+45,585964	+21,591658	64
243 8333,5	+54,591666	+14,850646	+1,014349	64	243 8368,5	-35,068229	+42,117321	+20,762359	64
243 8334,0	+52,039399	+21,193080	+3,845528	64	243 8369,0	-40,745598	+38,045568	+19,635398	64
243 8334,5	+48,649042	+27,196806	+6,616900	64	243 8369,5	-45,846081	+33,442231	+18,233671	64
243 8335,0	+44,467834	+32,759746	+9,282338	64	243 8370,0	-50,314119	+28,382892	+16,582860	64
243 8335,5	+39,559890	+37,787083	+11,797080	64	243 8370,5	-54,105461	+22,945548	+14,710742	64
243 8336,0	+34,004914	+42,194265	+14,119089	64	243 8371,0	-57,186618	+17,209249	+12,646573	64

J.D.	x	y	z		J.D.	x	y	z	
243 8371,5	-59,534264	+11,253034	+10,420580	64	243 8406,5	-12,188635	-57,786926	-22,632732	64
243 8372,0	-61,134561	+ 5,155030	+ 8,063550	64	243 8407,0	- 5,640260	-58,282033	-23,479863	64
243 8372,5	-61,982429	- 1,008197	+ 5,606467	64	243 8407,5	+ 0,978393	-58,110808	-24,058892	64
243 8373,0	-62,080985	- 7,162206	+ 3,080254	64	243 8408,0	+ 7,590563	-57,269782	-24,360823	64
243 8373,5	-61,440854	-13,235073	+ 0,515521	64	243 8408,5	+14,118086	-55,762556	-24,379460	64
243 8374,0	-60,079681	-19,157731	- 2,057605	64	243 8409,0	+20,482107	-53,600205	-24,111618	64
243 8374,5	-58,021709	-24,864240	- 4,609643	64	243 8409,5	+26,603847	-50,801420	-23,557270	64
243 8375,0	-55,297324	-30,292054	- 7,111904	64	243 8410,0	+32,405538	-47,392804	-22,719754	64
243 8375,5	-51,942759	-35,382273	- 9,536622	64	243 8410,5	+37,811348	-43,408845	-21,605852	64
243 8376,0	-47,999722	-40,079872	-11,857086	64	243 8411,0	+42,748433	-38,891931	-20,225914	64
243 8376,5	-43,515130	-44,333992	-14,047789	64	243 8411,5	+47,147983	-33,892157	-18,593868	64
243 8377,0	-38,540835	-48,098238	-16,084572	64	243 8412,0	+50,946341	-28,467048	-16,727216	64
243 8377,5	-33,133259	-51,330972	-17,944788	64	243 8412,5	+54,086002	-22,681058	-14,646934	64
243 8378,0	-27,353085	-53,995611	-19,607445	64	243 8413,0	+56,516716	-16,605043	-12,377358	64
243 8378,5	-21,264916	-56,061027	-21,053405	64	243 8413,5	+58,196469	-10,315536	- 9,945983	64
243 8379,0	-14,936814	-57,501821	-22,265557	64	243 8414,0	+59,092347	- 3,893902	- 7,383192	64
243 8379,5	- 8,439879	-58,298675	-23,228981	64	243 8414,5	+59,181508	+ 2,574590	-4,721974	64
243 8380,0	+ 1,847704	-58,438671	-23,931150	64	243 8415,0	+58,451794	+ 9,001867	-1,997522	64
243 8380,5	+ 4,764188	-57,915543	-24,362080	64	243 8415,5	+56,902403	+15,298199	+ 0,753157	64
243 8381,0	+11,318952	-56,729939	-24,514497	64	243 8416,0	+54,544491	+21,373524	+ 3,491752	64
243 8381,5	+17,739121	-54,889651	-24,384014	64	243 8416,5	+51,401344	+27,138761	+ 6,179170	64
243 8382,0	+23,947276	-52,409675	-23,969209	64	243 8417,0	+47,508730	+32,507365	+ 8,776125	64
243 8382,5	+29,866830	-49,312414	-23,271795	64	243 8417,5	+42,914727	+37,396802	+11,243798	64
243 8383,0	+35,422800	-45,627665	-22,296678	64	243 8418,0	+37,679568	+41,730231	+13,544515	64
243 8383,5	+40,542596	-41,392597	-21,052049	64	243 8418,5	+31,875001	+45,438086	+15,642495	64
243 8384,0	+45,156868	-36,651658	-19,549396	64	243 8419,0	+25,583480	+48,459732	+17,504588	64
243 8384,5	+49,200377	-31,456487	-17,803588	64	243 8419,5	+18,896966	+50,745021	+19,101048	64
243 8385,0	+52,612844	-25,865629	-15,832819	64	243 8420,0	+11,915362	+52,255649	+20,406252	64
243 8385,5	+55,339903	-19,944324	-13,658620	64	243 8420,5	+ 4,744666	+52,966376	+21,399383	64
243 8386,0	+57,334016	-13,764082	-11,305780	64	243 8421,0	- 2,505234	+52,865824	+22,064966	64
243 8386,5	+58,555530	- 7,402263	- 8,802276	64	243 8421,5	- 9,722942	+51,956958	+22,393319	64
243 8387,0	+58,973688	- 0,941434	- 6,179105	64	243 8422,0	-16,798070	+50,257093	+22,380785	64
243 8387,5	+58,567617	+ 5,531365	- 3,470077	64	243 8422,5	-23,623758	+47,797402	+22,029786	64
243 8388,0	+57,327479	+11,925591	- 0,711542	64	243 8423,0	-30,099054	+44,622021	+21,348692	64
243 8388,5	+55,255436	+18,148340	+ 2,058002	64	243 8423,5	-36,131059	+40,786703	+20,351455	64
243 8389,0	+52,366505	+24,105747	+ 4,798397	64	243 8424,0	-41,636678	+36,357128	+19,057101	64
243 8389,5	+48,689409	+29,704679	+ 7,468431	64	243 8424,5	-46,543964	+31,407019	+17,489073	64
243 8390,0	+44,266978	+34,854600	+10,026577	64	243 8425,0	-50,792982	+26,016130	+15,674493	64
243 8390,5	+39,156323	+39,469708	+12,431852	64	243 8425,5	-54,336205	+20,268255	+13,643367	64
243 8391,0	+33,428496	+43,471150	+14,644768	64	243 8426,0	-57,138510	+14,249356	+11,427820	64
243 8391,5	+27,167691	+46,789369	+16,628367	64	243 8426,5	-59,176838	+ 8,045847	+ 9,061352	64
243 8392,0	+20,469799	+49,366263	+18,349269	64	243 8427,0	-60,439499	+1,743135	+ 6,578153	64
243 8392,5	+13,440419	+51,157100	+19,778645	64	243 8427,5	-60,925411	+ 4,575593	+ 4,012549	64
243 8393,0	+ 6,192360	+52,132120	+20,893132	64	243 8428,0	-60,643164	-10,830312	+1,398502	64
243 8393,5	- 1,157266	+52,277452	+21,675488	64	243 8428,5	-59,610031	-16,944877	- 1,230771	64
243 8394,0	- 8,490177	+51,595481	+22,115066	64	243 8429,0	-57,851105	-22,847528	- 3,843102	64
243 8394,5	-15,690063	+50,104528	+22,207976	64	243 8429,5	-55,398311	-28,471207	- 8,407587	64
243 8395,0	-22,645565	+47,837908	+21,957000	64	243 8430,0	-52,289758	-33,753782	- 6,894763	64
243 8395,5	-29,252877	+44,842374	+21,371198	64	243 8430,5	-48,568945	-38,638132	-11,276704	64
243 8396,0	-35,417841	+41,176210	+20,465337	64	243 8431,0	-44,284261	-43,072232	-13,527117	64
243 8396,5	-41,057513	+36,907115	+19,259175	64	243 8431,5	-39,488432	-47,009137	-15,621382	64
243 8397,0	-46,101060	+32,109903	+17,776592	64	243 8432,0	-34,238204	-50,407080	-17,536635	64
243 8397,5	-50,490254	+26,864418	+16,044778	64	243 8432,5	-28,593941	-53,229446	-19,251786	64
243 8398,0	-54,179350	+21,253469	+14,093385	64	243 8433,0	-22,619444	-55,444975	-20,747638	64
243 8398,5	-57,134703	+15,361115	+11,953763	64	243 8433,5	-16,381607	-57,027795	-22,006920	64
243 8399,0	-59,334088	+ 9,271186	+ 9,658301	64	243 8434,0	- 9,950251	-57,957741	-23,014442	64
243 8399,5	-50,765903	+ 3,066116	+ 7,239851	64	243 8434,5	- 3,397802	-58,220507	-23,757197	64
243 8400,0	-61,428245	- 3,173971	+ 4,731272	64	243 8435,0	+ 3,200975	-57,808104	-24,224571	64
243 8400,5	-61,328034	- 9,371942	+ 2,165065	64	243 8435,5	+ 9,769401	-56,719064	-24,408471	64
243 8401,0	-60,480183	-15,454121	- 0,426911	64	243 8436,0	+16,229338	-54,958950	-24,303589	64
243 8401,5	-58,906777	-21,350627	- 3,013656	64	243 8436,5	+22,501807	-52,540726	-23,907603	64
243 8402,0	-56,636475	-26,995620	- 5,565180	64	243 8437,0	+28,507715	-49,485084	-23,221401	64
243 8402,5	-53,703860	-32,327429	- 8,052637	64	243 8437,5	+34,168727	-45,820812	-22,249308	64
243 8403,0	-50,148973	-37,288680	-10,448410	64	243 8438,0	+39,408289	-41,585005	-20,999278	64
243 8403,5	-46,016919	-41,826420	-12,726204	64	243 8438,5	+44,152754	-36,823133	-19,483022	64
243 8404,0	-41,357524	-45,892241	-14,861139	64	243 8439,0	+48,332651	-31,589026	-17,716147	64
243 8404,5	-36,225001	-49,442365	-16,829810	64	243 8439,5	+51,884024	-25,944595	-15,718147	64
243 8405,0	-30,677767	-52,437946	-18,610435	64	243 8440,0	+54,749729	-19,959310	-13,512324	64
243 8405,5	-24,778120	-54,845204	-20,182927	64	243 8440,5	+56,880838	-13,709553	-11,125663	64
243 8406,0	-18,591995	-56,635768	-21,529092	64	243 8441,0	+58,237829	- 7,277635	- 8,588523	64

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z	J.D.	x	y	z
243 8441,5	+58,791786	-0,750662	-5,934289	243 8476,5	-16,275056	+51,346923	+23,127506
243 8442,0	+58,525273	+5,780812	-3,198904	243 8477,0	-22,986215	+49,102186	+22,820664
243 8442,5	+57,433041	+12,224277	-0,420296	243 8477,5	-29,373239	+46,154345	+22,187071
243 8443,0	+55,522558	+18,486865	+2,362205	243 8478,0	-35,350536	+42,552579	+21,239156
243 8443,5	+52,814141	+24,477013	+5,108577	243 8478,5	-40,840270	+38,354450	+19,993628
243 8444,0	+49,340836	+30,106100	+7,778771	243 8479,0	-45,773281	+33,624775	+18,471076
243 8444,5	+45,148102	+35,290101	+10,333447	243 8479,5	-50,089785	+28,434357	+16,695519
243 8445,0	+40,293158	+39,951112	+12,734672	243 8480,0	-53,739967	+22,858758	+14,693950
243 8445,5	+34,844119	+44,018811	+14,946596	243 8480,5	-56,684285	+16,976989	+12,495801
243 8446,0	+28,878899	+47,431751	+16,936121	243 8481,0	-58,893684	+10,870265	+10,132454
243 8446,5	+22,483912	+50,138473	+18,673474	243 8481,5	-60,349497	+4,620742	+7,636692
243 8447,0	+15,752669	+52,098572	+20,132787	243 8482,0	-61,043409	+1,689631	+5,042215
243 8447,5	+8,784109	+53,283360	+21,292553	243 8482,5	-60,976923	+7,980234	+2,383116
243 8448,0	+1,680886	+53,676445	+22,136009	243 8483,0	-60,161015	-14,172759	+0,306558
243 8448,5	-5,452447	+53,274063	+22,651471	243 8483,5	-58,615442	-20,192084	-2,993252
243 8449,0	-12,511340	+52,085152	+22,832541	243 8484,0	-56,368127	-25,967031	-5,644279
243 8449,5	-19,393153	+50,131082	+22,678180	243 8484,5	-53,454372	-31,430967	-8,228137
243 8450,0	-25,999023	+47,445187	+22,192701	243 8485,0	-49,916085	-36,522301	-10,714806
243 8450,5	-32,235655	+44,072037	+21,385629	243 8485,5	-45,801026	-41,184817	-13,075958
243 8451,0	-38,016979	+40,066385	+20,271438	243 8486,0	-41,162086	-45,367984	-15,285158
243 8451,5	-43,265556	+35,491925	+18,869158	243 8486,5	-36,056543	-49,027039	-17,317967
243 8452,0	-47,913773	+30,419845	+17,201897	243 8487,0	-30,545462	-52,123158	-19,152082
243 8452,5	-51,904729	+24,927291	+15,296276	243 8487,5	-24,693086	-54,623428	-20,767376
243 8453,0	-55,192831	+19,095719	+13,181824	243 8488,0	-18,566365	-56,500951	-22,145995
243 8453,5	-57,743987	+13,009264	+10,890295	243 8488,5	-12,234453	-57,734709	-23,272340
243 8454,0	-59,535657	+6,753193	+8,455035	243 8489,0	-5,768376	-58,309720	-24,133186
243 8454,5	-60,556448	+0,412440	+5,910343	243 8489,5	+0,759357	-58,217004	-24,717686
243 8455,0	-60,805601	-5,929665	+3,290873	243 8490,0	+7,275046	-57,453626	-25,017438
243 8455,5	-60,292323	-12,192508	+0,631132	243 8490,5	+13,704133	-56,022923	-25,026597
243 8456,0	-59,034930	-18,299090	-2,035000	243 8491,0	+19,971522	-53,934570	-24,741953
243 8456,5	-57,059977	-24,176720	-4,674639	243 8491,5	+26,001975	-51,204935	-24,163109
243 8457,0	-54,401365	-29,757566	-7,256200	243 8492,0	+31,720520	-47,857207	-23,292594
243 8457,5	-51,099487	-34,978991	-9,749626	243 8492,5	+37,053036	-43,921834	-22,136082
243 8458,0	-47,200413	-39,783795	-12,126587	243 8493,0	+41,926957	-39,436803	-20,702605
243 8458,5	-42,755169	-44,120342	-14,360569	243 8493,5	+46,272037	-34,447875	-19,004717
243 8459,0	-37,819074	-47,942580	-16,426984	243 8494,0	+50,021434	-29,008900	-17,058727
243 8459,5	-32,451248	-51,210131	-18,303233	243 8494,5	+53,112860	-23,181885	-14,884859
243 8460,0	-26,714113	-53,888229	-19,968736	243 8495,0	+55,490034	-17,036982	-12,507373
243 8460,5	-20,673007	-55,947725	-21,404975	243 8495,5	+57,104119	-10,652156	-9,954571
243 8461,0	-14,395891	-57,365168	-22,595553	243 8496,0	+57,915536	-4,112637	-7,258740
243 8461,5	-7,953056	-58,122882	-23,526268	243 8496,5	+57,895482	+2,490063	-4,455891
243 8462,0	-1,416854	-58,209053	-24,185162	243 8497,0	+57,027706	+9,059468	-1,585351
243 8462,5	+5,138552	-57,617950	-24,562656	243 8497,5	+55,309832	+15,495880	+1,310821
243 8463,0	+11,673505	-56,350252	-24,651709	243 8498,0	+52,754517	+21,698482	+4,188639
243 8463,5	+18,003197	-54,413234	-24,447935	243 8498,5	+49,390054	+27,567706	+7,003115
243 8464,0	+24,158131	-51,821259	-23,949848	243 8499,0	+45,260554	+33,007815	+9,709358
243 8464,5	+30,024685	-48,596058	-23,159045	243 8499,5	+40,425319	+37,929444	+12,263693
243 8465,0	+35,525810	-44,767171	-22,080462	243 8500,0	+34,957767	+42,252095	+14,624838
243 8465,5	+40,585942	-40,372293	-20,722588	243 8500,5	+28,943683	+45,906238	+16,754960
243 8466,0	+45,132032	-35,457532	-19,097702	243 8501,0	+22,479009	+48,835054	+18,620631
243 8466,5	+49,094750	-30,077523	-17,222007	243 8501,5	+15,667372	+50,995678	+20,193601
243 8467,0	+52,409899	-24,295410	-15,115793	243 8502,0	+8,617344	+52,359826	+21,451322
243 8467,5	+55,019965	-18,182571	-12,803437	243 8502,5	+1,439773	+52,913920	+22,377258
243 8468,0	+56,875590	-11,818007	-10,313321	243 8503,0	-5,754782	+52,658722	+22,960999
243 8468,5	+57,937292	-5,287510	-7,677623	243 8503,5	-12,858353	+51,608636	+23,198160
243 8469,0	+58,176790	+1,317599	-4,931928	243 8504,0	-19,767570	+49,790555	+23,090109
243 8469,5	+57,578484	+7,901949	-2,114746	243 8504,5	-26,385326	+47,242636	+22,643602
243 8470,0	+56,140290	+14,367957	+0,733181	243 8505,0	-32,622076	+44,012924	+21,870333
243 8470,5	+53,874438	+20,617825	+3,569631	243 8505,5	-38,396843	+40,157904	+20,786401
243 8471,0	+50,807611	+26,555683	+6,351805	243 8506,0	-43,637911	+35,741095	+19,411807
243 8471,5	+46,980750	+32,089746	+9,037239	243 8506,5	-48,283309	+30,831697	+17,769905
243 8472,0	+42,448357	+37,134376	+11,584746	243 8507,0	-52,281087	+25,503287	+15,886886
243 8472,5	+37,277366	+41,611967	+13,955299	243 8507,5	-55,589389	+19,832602	+13,791281
243 8473,0	+31,545734	+45,454598	+16,112878	243 8508,0	-58,176413	+13,898408	+11,513453
243 8473,5	+25,340675	+48,605303	+18,025173	243 8508,5	-60,020323	+7,780471	+9,085174
243 8474,0	+18,756754	+51,019092	+19,664184	243 8509,0	-61,108971	+1,558559	+6,539173
243 8474,5	+11,893863	+52,663534	+21,006673	243 8509,5	-61,439555	-4,688435	+3,908716
243 8475,0	+4,855197	+53,519028	+22,034472	243 8510,0	-61,018365	-10,883325	+1,272364
243 8475,5	-2,254739	+53,578889	+22,734711	243 8510,5	-59,860188	-16,951383	+1,472040
243 8476,0	-9,332018	+52,848887	+23,099811	243 8511,0	-57,987911	-22,821046	-4,156430

J.D.	x	y	z	J.D.	x	y	z
243 8511,5	-55,431967	-28,424516	-6,794116	243 8546,5	+31,160519	-49,005956	-24,173583
243 8512,0	-52,229686	-33,698296	-9,354414	243 8547,0	+36,574534	-45,316568	-23,131327
243 8512,5	-48,424742	-38,583673	-11,808064	243 8547,5	+41,552218	-41,096444	-21,817650
243 8513,0	-44,066482	-43,027087	-14,127418	243 8548,0	+46,028425	-36,388197	-20,244272
243 8513,5	-39,209286	-46,980453	-16,286669	243 8548,5	+49,941463	-31,240791	-18,425991
243 8514,0	-33,911962	-50,401446	-18,262017	243 8549,0	+53,233823	-25,709552	-16,380748
243 8514,5	-28,237050	-53,253600	-20,031789	243 8549,5	+55,852917	-19,856091	-14,129679
243 8515,0	-22,250288	-55,506542	-21,576572	243 8550,0	+57,751986	-13,748196	-11,697157
243 8515,5	-16,019981	-57,135948	-22,879287	243 8550,5	+58,891140	-7,459633	-9,110818
243 8516,0	-9,616511	-58,123689	-23,925273	243 8551,0	+59,238327	-1,069769	-6,401486
243 8516,5	+3,111816	-58,457825	-24,702348	243 8551,5	+58,770654	+5,336922	-3,603103
243 8517,0	+3,421072	-58,132590	-25,200851	243 8552,0	+57,475613	+11,671619	-0,752527
243 8517,5	+9,908457	-57,148462	-25,413716	243 8552,5	+55,352337	+17,842191	+2,110796
243 8518,0	+16,276368	-55,512141	-25,336494	243 8553,0	+52,412912	+23,754551	+4,945270
243 8518,5	+22,450992	-53,236648	-24,967445	243 8553,5	+48,683401	+29,314365	+7,707793
243 8519,0	+28,359084	-50,341430	-24,307626	243 8554,0	+44,204667	+34,429102	+10,354537
243 8519,5	+33,928372	-46,852404	-23,360948	243 8554,5	+39,032767	+39,010369	+12,841919
243 8520,0	+39,088094	-42,802200	-22,134335	243 8555,0	+33,238816	+42,976489	+15,127721
243 8520,5	+43,769518	-38,230250	-20,637818	243 8555,5	+26,908160	+46,255082	+17,172288
243 8521,0	+47,906685	-33,183047	-18,884712	243 8556,0	+20,138913	+48,785633	+18,939763
243 8521,5	+51,437113	-27,714211	-16,891735	243 8556,5	+13,039730	+50,521652	+20,399245
243 8522,0	+54,302826	-21,884666	-14,679169	243 8557,0	+5,727034	+51,432414	+21,525832
243 8522,5	+56,451461	-15,762616	-12,270965	243 8557,5	-1,768237	+51,503996	+22,301364
243 8523,0	+57,837478	-9,423381	-9,694796	243 8558,0	-9,054071	+50,739610	+22,714945
243 8523,5	+58,423612	-2,949068	-6,982054	243 8558,5	-16,288028	+49,159129	+22,763055
243 8524,0	+58,182483	+3,572072	-4,167744	243 8559,0	-23,244407	+46,797966	+22,449415
243 8524,5	+57,098092	+10,046625	-1,290211	243 8559,5	-29,838974	+43,705346	+21,784504
243 8525,0	+55,167423	+16,377359	+1,609286	243 8560,0	-35,969099	+39,942219	+20,784877
243 8525,5	+52,401786	+22,465004	+4,487179	243 8560,5	-41,551248	+35,578922	+19,472326
243 8526,0	+48,827913	+28,210398	+7,298431	243 8561,0	-46,514679	+30,692847	+17,872953
243 8526,5	+44,488594	+33,517019	+9,997528	243 8561,5	-50,801758	+25,366229	+16,016264
243 8527,0	+39,442609	+38,293631	+12,539633	243 8562,0	-54,367869	+19,684114	+13,934281
243 8527,5	+33,764113	+42,457100	+14,881850	243 8562,5	-57,180853	+13,732585	+11,660726
243 8528,0	+27,541242	+45,935026	+16,984476	243 8563,0	-59,220422	+7,597342	+9,230351
243 8528,5	+20,873991	+48,668020	+18,812215	243 8563,5	-60,477205	+1,362481	+6,678326
243 8529,0	+13,871572	+50,611554	+20,335192	243 8564,0	-60,951965	-4,890396	+4,039770
243 8529,5	+6,649330	+51,737044	+21,529758	243 8564,5	-60,654630	-11,082908	+1,349343
243 8530,0	-0,674493	+52,032404	+22,379028	243 8565,0	-59,603478	-17,140425	+1,359059
243 8530,5	-7,982003	+51,501704	+22,873062	243 8565,5	-57,824344	-22,992465	-4,052558
243 8531,0	-15,158621	+50,164369	+23,008813	243 8566,0	-55,349885	-28,572982	-6,699495
243 8531,5	-22,095655	+48,053781	+22,789785	243 8566,5	-52,218939	-33,820605	-9,269595
243 8532,0	-28,692395	+45,215550	+22,225503	243 8567,0	-48,476020	-38,678869	-11,734106
243 8532,5	-34,857682	+41,705688	+21,330887	243 8567,5	-44,170683	-43,096322	-14,065933
243 8533,0	-40,510975	+37,588607	+20,125507	243 8568,0	-39,357131	-47,026752	-16,239758
243 8533,5	-45,582897	+32,935203	+18,632802	243 8568,5	-34,093710	-50,429338	-18,232155
243 8534,0	-50,015525	+27,821153	+16,879400	243 8569,0	-28,442466	-53,268780	-20,021699
243 8534,5	-53,762292	+22,325303	+14,894410	243 8569,5	-22,468695	-55,515510	-21,589097
243 8535,0	-56,787707	+16,528277	+12,708802	243 8570,0	-16,240502	-57,145830	-22,917291
243 8535,5	-59,066927	+10,511288	+10,354856	243 8570,5	-9,828329	-58,142091	-23,991591
243 8536,0	-60,585217	+4,355126	+7,865685	243 8571,0	-3,304449	-58,492857	-24,799784
243 8536,5	-61,337456	-1,860693	+5,274801	243 8571,5	+3,257535	-58,193000	-25,332240
243 8537,0	-61,327457	-8,058656	+2,615763	243 8572,0	+9,783250	-57,243919	-25,582054
243 8537,5	-60,567506	-14,163859	+0,078140	243 8572,5	+16,198125	-55,653476	-25,545078
243 8538,0	-59,077734	-20,104552	-2,774196	243 8573,0	+22,427998	-53,436178	-25,220064
243 8538,5	-56,885572	-25,812590	-5,440496	243 8573,5	+28,399718	-50,613117	-24,608689
243 8539,0	-54,025304	-31,223886	-8,046184	243 8574,0	+34,041802	-47,212004	-23,715658
243 8539,5	-50,537398	-36,278734	-10,561659	243 8574,5	+39,285032	-43,267008	-22,548669
243 8540,0	-46,468111	-40,922207	-12,958784	243 8575,0	+44,063209	-38,818776	-21,118516
243 8540,5	-41,868898	-45,104417	-15,211054	243 8575,5	+48,313714	-33,914186	-19,439037
243 8541,0	-36,795897	-48,780830	-17,293788	243 8576,0	+51,978305	-28,606236	-17,527134
243 8541,5	-31,309358	-51,912438	-19,184246	243 8576,5	+55,003805	-22,953799	-15,402760
243 8542,0	-25,473182	-54,466055	-20,861829	243 8577,0	+57,342826	-17,021329	-13,088838
243 8542,5	-19,354328	-56,414494	-22,308182	243 8577,5	+58,954517	-10,878514	-10,611213
243 8543,0	-13,022251	-57,736616	-23,507294	243 8578,0	+59,805417	-4,599898	-7,998558
243 8543,5	-6,548399	-58,417584	-24,445659	243 8578,5	+59,870283	+1,735648	-5,282242
243 8544,0	-0,005609	-58,448817	-25,112292	243 8579,0	+59,132978	+8,045540	-2,496150
243 8544,5	+6,532384	-57,828119	-25,498862	243 8579,5	+57,587332	+14,244247	+0,323566
243 8545,0	+12,991508	-56,559693	-25,599741	243 8580,0	+55,238100	+20,244242	+3,138784
243 8545,5	+19,297853	-54,654127	-25,412053	243 8580,5	+52,101755	+25,957138	+5,909834
243 8546,0	+25,378194	-52,128411	-24,935731	243 8581,0	+48,207280	+31,295082	+8,596018

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z		J.D.	x	y	z	
243 8581,5	+43,596759	+36,172368	+11,156237	64	243 8606,5	+58,818870	+11,370954	- 0,921085	65
Epoch 1965.0					243 8607,0	+56,959917	+17,467268	+ 1,889332	65
243 8573,0	+22,442391	-53,431164	-25,217884	65	243 8607,5	+54,320181	+23,319792	+ 4,672237	65
243 8573,5	+28,413421	-50,606768	-24,605929	65	243 8608,0	+50,923522	+28,843978	+ 7,388764	65
243 8574,0	+34,054657	-47,204394	-23,712349	65	243 8608,5	+46,805458	+33,957340	+ 9,999772	65
243 8574,5	+39,296893	-43,258226	-22,544852	65	243 8609,0	+42,013220	+38,580802	+12,466430	65
243 8575,0	+44,073936	-38,808926	-21,114234	65	243 8609,5	+36,605800	+42,640271	+14,750888	65
243 8575,5	+48,323182	-33,903386	-19,434342	65	243 8610,0	+30,653560	+46,068178	+16,816980	65
243 8576,0	+51,986400	-28,594618	-17,522083	65	243 8610,5	+24,237687	+48,805123	+18,630991	65
243 8576,5	+55,010430	-22,941504	-15,397415	65	243 8611,0	+17,449236	+50,801495	+20,162456	65
243 8577,0	+57,347900	-17,008512	-13,083266	65	243 8611,5	+10,387850	+52,019075	+21,384967	65
243 8577,5	+58,957978	-10,865337	-10,605484	65	243 8612,0	+ 3,160035	+52,432375	+22,276939	65
243 8578,0	+59,807220	- 4,586531	- 7,992747	65	243 8612,5	- 4,122909	+52,029782	+22,822305	65
243 8578,5	+59,870407	+ 1,749030	- 5,276425	65	243 8613,0	-11,347290	+50,814308	+23,011069	65
243 8579,0	+59,131420	+ 8,058757	- 2,490404	65	243 8613,5	-18,399656	+48,803930	+22,839729	65
243 8579,5	+57,584115	+14,257118	+ 0,329161	65	243 8614,0	-25,169550	+46,031365	+22,311449	65
243 8580,0	+55,233268	+20,256587	+3,144150	65	243 8614,5	-31,552191	+42,543277	+21,435973	65
243 8580,5	+52,095378	+25,968783	+ 5,914896	65	243 8615,0	-37,451065	+38,399151	+20,229414	65
243 8581,0	+48,199449	+31,305856	+ 8,600701	65	243 8615,5	-42,780006	+33,669429	+18,713646	65
243 8581,5	+43,587589	+36,182112	+11,160472	65	243 8616,0	-47,465013	+28,433589	+16,915647	65
243 8582,0	+38,315298	+40,515863	+13,553490	65	243 8616,5	-51,445347	+22,777807	+14,866623	65
243 8582,5	+32,451424	+44,231424	+15,740273	65	243 8617,0	-54,674225	+16,792683	+12,601069	65
243 8583,0	+26,077730	+47,261328	+17,683572	65	243 8617,5	-57,118925	+10,571003	+10,155827	65
243 8583,5	+19,287871	+49,548492	+19,349408	65	243 8618,0	-58,760364	+ 4,205646	+ 7,569141	65
243 8584,0	+12,185798	+51,048254	+20,708104	65	243 8618,5	-59,592393	- 2,212179	+ 4,879814	65
243 8584,5	+ 4,883620	+51,730203	+21,735297	65	243 8619,0	-59,620776	- 8,594431	+ 2,126479	65
243 8585,0	- 2,501069	+51,579506	+22,412764	65	243 8619,5	-58,862059	-14,857402	+ 0,653038	65
243 8585,5	- 9,848226	+50,597706	+22,729083	65	243 8620,0	-57,342247	-20,922563	+ 3,422204	65
243 8586,0	-17,038613	+48,802827	+22,680005	65	243 8620,5	-55,095672	-26,717155	+ 6,146146	65
243 8586,5	-23,957057	+46,228826	+22,268540	65	243 8621,0	-52,163776	-32,174542	- 8,791933	65
243 8587,0	-30,495433	+42,924308	+21,504712	65	243 8621,5	-48,594049	-37,234376	-11,328738	65
243 8587,5	-36,555292	+38,950778	+20,405063	65	243 8622,0	-44,439130	-41,842649	-13,727968	65
243 8588,0	-42,049927	+34,380447	+18,991925	65	243 8622,5	-39,756003	-45,951665	-15,963331	65
243 8588,5	-46,905741	+29,293766	+17,292507	65	243 8623,0	-34,605302	-49,519940	-18,010842	65
243 8589,0	-51,063038	+23,776983	+15,337903	65	243 8623,5	-29,050765	-52,512131	-19,848876	65
243 8589,5	-54,476237	+17,919801	+13,162117	65	243 8624,0	-23,158752	-54,898931	-21,458159	65
243 8590,0	-57,113502	+11,813185	+10,801087	65	243 8624,5	-16,997829	-56,656976	-22,821771	65
243 8590,5	-58,956132	+ 5,547571	+ 8,291841	65	243 8625,0	-10,638456	-57,768903	-23,921599	65
243 8591,0	-59,997514	+ 0,788683	+ 5,671744	65	243 8625,5	- 4,152626	-58,223328	-24,756384	65
243 8591,5	-60,242100	- 7,110464	+ 2,977868	65	243 8626,0	+ 2,386465	-58,014927	-25,305763	65
243 8592,0	-59,704255	-13,336777	+ 0,246518	65	243 8626,5	+ 8,904745	-57,144545	-25,566376	65
243 8592,5	-58,407103	-19,391372	+ 2,487159	65	243 8627,0	+15,327692	-55,619384	-25,533973	65
243 8593,0	-56,381519	-25,203155	+ 5,189447	65	243 8627,5	+21,580755	-53,453130	-25,207118	65
243 8593,5	-53,665105	-30,706405	+ 7,828271	65	243 8628,0	+27,589915	-50,666153	-24,587326	65
243 8594,0	-50,301458	-35,840978	-10,373340	65	243 8628,5	+33,282271	-47,285633	-23,679195	65
243 8594,5	-46,339327	-40,552291	-12,796251	65	243 8629,0	+38,586757	-43,345703	-22,490518	65
243 8595,0	-41,832070	-44,791418	-15,070566	65	243 8629,5	+43,434957	-38,887514	-21,032408	65
243 8595,5	-36,837043	-48,515030	-17,171848	65	243 8630,0	+47,761933	-33,959145	-19,319325	65
243 8596,0	-31,415211	-51,685495	-19,077767	65	243 8630,5	+51,507261	-28,615547	-17,369167	65
243 8596,5	-25,630691	-54,270862	-20,768113	65	243 8631,0	+54,615943	-22,918194	-15,203211	65
243 8597,0	-19,550358	-56,244958	-22,224893	65	243 8631,5	+57,039528	-16,934708	-12,846046	65
243 8597,5	-13,243489	-57,587480	-23,432408	65	243 8632,0	+58,737038	-10,738242	-10,325404	65
243 8598,0	- 6,781371	-58,284133	-24,377337	65	243 8632,5	+59,676011	- 4,406766	- 7,671956	65
243 8598,5	- 0,236876	-58,326696	-25,048825	65	243 8633,0	+59,833408	+ 1,977840	- 4,919003	65
243 8599,0	+ 6,315956	-57,713318	-25,438648	65	243 8633,5	+59,196347	+ 8,330836	- 2,102086	65
243 8599,5	+12,802409	-56,448541	-25,541276	65	243 8634,0	+57,762807	+14,565791	+ 0,741444	65
243 8600,0	+19,147649	-54,543515	-25,354011	65	243 8634,5	+55,542080	+20,595861	+ 3,572939	65
243 8600,5	+25,277327	-52,016136	-24,877127	65	243 8635,0	+52,555035	+26,335127	+ 6,353014	65
243 8601,0	+31,118204	-48,891047	-24,113906	65	243 8635,5	+48,834287	+31,700037	+ 9,042161	65
243 8601,5	+36,598921	-45,199752	-23,070800	65	243 8636,0	+44,423971	+36,610790	+11,601359	65
243 8602,0	+41,650716	-40,980538	-21,757434	65	243 8636,5	+39,379500	+40,992800	+13,992744	65
243 8602,5	+46,208267	-36,278373	-20,186665	65	243 8637,0	+33,766956	+44,778083	+16,180287	65
243 8603,0	+50,210445	-31,144666	-18,374555	65	243 8637,5	+27,662304	+47,906563	+18,130409	65
243 8603,5	+53,601264	-25,637055	-16,340373	65	243 8638,0	+21,150436	+50,327375	+19,812674	65
243 8604,0	+56,330592	-19,818947	-14,106457	65	243 8638,5	+14,323914	+51,999962	+21,200377	65
243 8604,5	+58,355128	-13,759107	-11,698151	65	243 8639,0	+ 7,281582	+52,895165	+22,271142	65
243 8605,0	+59,639065	- 7,531030	- 9,143583	65	243 8639,5	+ 0,126900	+52,995910	+23,007417	65
243 8605,5	+60,154966	- 1,212311	- 6,473493	65	243 8640,0	- 7,033841	+52,979939	+23,396933	65
243 8606,0	+59,884447	+ 5,116140	- 3,720958	65	243 8640,5	-14,093504	+50,810121	+23,433059	65
					243 8641,0	-20,946160	+48,554416	+23,114981	65

J.D.	x	y	z	J.D.	x	y	z		
243 8641,5	-27,489261	+45,565743	+22,447857	65	243 8676,5	-45,950491	-39,581419	-13,067329	65
243 8642,0	-33,625689	+41,891211	+21,442683	65	243 8677,0	-41,404977	-43,941455	-15,431914	65
243 8642,5	-39,265798	+37,589237	+20,116117	65	243 8677,5	-36,371392	-47,774651	-17,611727	65
243 8643,0	-44,329197	+32,728219	+18,490066	65	243 8678,0	-30,915030	-51,041697	-19,583028	65
243 8643,5	-48,746278	+27,384942	+16,591153	65	243 8678,5	-25,104042	-53,710162	-21,324815	65
243 8644,0	-52,459406	+21,642821	+14,450057	65	243 8679,0	-19,008737	-55,754382	-22,818851	65
243 8644,5	-55,423696	+15,589952	+12,100755	65	243 8679,5	-12,700954	-57,155333	-24,049674	65
243 8645,0	-57,607412	+ 9,317176	+ 9,579701	65	243 8680,0	+ 6,253510	-57,900410	-25,004555	65
243 8645,5	-58,991957	+ 2,916163	+ 6,925013	65	243 8680,5	+ 0,260236	-57,983321	-25,673478	65
243 8646,0	-59,571424	- 3,522380	+ 4,175628	65	243 8681,0	+ 6,766775	-57,403839	-26,049099	65
243 8646,5	-59,351938	- 9,910260	+ 1,370578	65	243 8681,5	+13,192786	-56,167865	-26,126794	65
243 8647,0	-58,350722	-16,163136	- 1,451698	65	243 8682,0	+19,465430	-54,287239	-25,904601	65
243 8647,5	-56,594956	-22,201601	+ 4,253920	65	243 8682,5	+25,512682	-51,779816	-25,383296	65
243 8648,0	-54,120614	-27,951959	- 7,000435	65	243 8683,0	+31,263637	-48,669500	-24,566451	65
243 8648,5	-50,971316	-33,346814	- 9,657578	65	243 8683,5	+36,648922	-44,986371	-23,460507	65
243 8649,0	-47,197085	-38,325373	-12,193928	65	243 8684,0	+41,601098	-40,766769	-22,074872	65
243 8649,5	-42,853370	-42,833651	-14,580495	65	243 8684,5	+46,055284	-36,053514	-20,422080	65
243 8650,0	-38,000019	-46,824461	-16,790816	65	243 8685,0	+49,949768	-30,895985	-18,517877	65
243 8650,5	-32,700456	-50,257354	-18,801012	65	243 8685,5	+53,226843	-25,350232	-16,381368	65
243 8651,0	-27,020982	-53,098506	-20,589809	65	243 8686,0	+55,833783	-19,478995	-14,035114	65
243 8651,5	-21,030151	-55,320553	-22,138521	65	243 8686,5	+57,723872	-13,351567	-11,505173	65
243 8652,0	-14,798272	-56,902417	-23,431038	65	243 8687,0	+58,857693	- 7,043500	- 8,821108	65
243 8652,5	- 8,397010	-52,922903	-24,453813	65	243 8687,5	+59,204386	- 0,636083	- 6,015874	65
243 8653,0	- 1,899036	-58,092132	-25,195867	65	243 8688,0	+58,742995	+ 5,784443	- 3,125590	65
243 8653,5	+ 4,622307	-57,688448	-25,648794	65	243 8688,5	+57,463799	+12,127988	- 0,189213	65
243 8654,0	+11,093293	-56,621465	-25,806807	65	243 8689,0	+55,369523	+18,302017	+ 2,752003	65
243 8654,5	+17,440116	-54,900659	-25,666800	65	243 8689,5	+52,476201	+24,213247	+ 5,655141	65
243 8655,0	+23,589269	-52,541756	-25,228446	65	243 8690,0	+48,813911	+29,769618	+ 8,476445	65
243 8655,5	+29,467921	-49,566882	-24,494281	65	243 8690,5	+44,426925	+34,882435	+11,172242	65
243 8656,0	+35,004444	-46,004775	-23,469869	65	243 8691,0	+39,373442	+39,468573	+13,699955	65
243 8656,5	+40,128993	-41,890943	-22,163909	65	243 8691,5	+33,724806	+43,452679	+16,019150	65
243 8657,0	+44,774186	-37,267760	-20,588361	65	243 8692,0	+27,564183	+46,769181	+18,092562	65
243 8657,5	+48,876045	-32,184680	-18,758626	65	243 8692,5	+20,984774	+49,363976	+19,887016	65
243 8658,0	+52,374818	-26,698099	-16,693571	65	243 8693,0	+14,087722	+51,195794	+21,374236	65
243 8658,5	+55,216143	-20,871289	-14,415607	65	243 8693,5	+ 6,979728	+52,237100	+22,531494	65
243 8659,0	+57,352195	-14,774084	-11,950671	65	243 8694,0	- 0,229453	+52,474435	+23,341992	65
243 8659,5	+58,742847	- 8,482347	- 9,328102	65	243 8694,5	- 7,429450	+51,908464	+23,795134	65
243 8660,0	+59,356932	- 2,077259	- 6,580453	65	243 8695,0	-14,511630	+50,553476	+23,886534	65
243 8660,5	+59,173352	+ 4,355668	- 3,743173	65	243 8695,5	-21,371240	+48,436657	+23,617906	65
243 8661,0	+58,182183	+10,727780	- 0,854176	65	243 8696,0	-27,909235	+45,596940	+22,996735	65
243 8661,5	+56,385447	+16,948718	+ 2,046701	65	243 8696,5	-34,033894	+42,083867	+22,035938	65
243 8662,0	+53,797758	+22,928006	+ 4,918334	65	243 8697,0	-39,662040	+37,956139	+20,753334	65
243 8662,5	+50,446640	+28,576813	+ 7,719054	65	243 8697,5	-44,720082	+33,280285	+19,171161	65
243 8663,0	+46,372428	+33,809701	+10,407428	65	243 8698,0	-49,144678	+28,129131	+17,315471	65
243 8663,5	+41,627926	+38,546435	+12,943088	65	243 8698,5	-52,883276	+22,580468	+15,215581	65
243 8664,0	+36,277640	+42,713675	+15,287537	65	243 8699,0	-55,894347	+16,715615	+12,903466	65
243 8664,5	+30,396745	+46,246537	+17,404957	65	243 8699,5	-58,147517	+10,618121	+10,413203	65
243 8665,0	+24,069721	+49,089923	+19,262900	65	243 8700,0	-59,623489	+ 4,372512	+ 7,780394	65
243 8665,5	+17,388806	+51,199664	+20,832973	65	243 8700,5	-60,313792	- 1,936923	+ 5,041615	65
243 8666,0	+10,452264	+52,543340	+22,091340	65	243 8701,0	-60,220471	- 8,227217	+ 2,233906	65
243 8666,5	+ 3,362534	+53,100875	+23,019189	65	243 8701,5	-59,355640	-14,417761	- 0,605744	65
243 8667,0	- 3,775657	+52,864795	+23,603003	65	243 8702,0	-57,740857	-20,431235	- 3,440861	65
243 8667,5	-10,857207	+51,840331	+23,834830	65	243 8702,5	-55,406497	-26,194441	- 6,235922	65
243 8668,0	-17,778490	+50,045096	+23,712281	65	243 8703,0	-52,391030	-31,639042	- 8,956759	65
243 8668,5	-24,439173	+47,508725	+23,238593	65	243 8703,5	-48,740159	-36,702171	-11,570896	65
243 8669,0	-30,743899	+44,272115	+22,422420	65	243 8704,0	-44,506019	-41,326929	-14,047872	65
243 8669,5	-36,603854	+40,386608	+21,277660	65	243 8704,5	-39,746251	-45,462759	-16,359490	65
243 8670,0	-41,938189	+35,912897	+19,823094	65	243 8705,0	-34,523191	-49,065745	-18,480032	65
243 8670,5	-46,675245	+30,919826	+18,082001	65	243 8705,5	-28,902954	-52,098739	-20,386405	65
243 8671,0	-50,753592	+25,483060	+16,081647	65	243 8706,0	-22,954633	-54,531433	-22,058254	65
243 8671,5	-54,122823	+19,683614	+13,852744	65	243 8706,5	-16,749529	-56,340337	-23,478028	65
243 8672,0	-56,744096	+13,606328	+11,428818	65	243 8707,0	-10,360449	-57,508742	-24,631044	65
243 8672,5	-58,590418	+ 7,338348	+ 8,845574	65	243 8707,5	- 3,861042	-58,026507	-25,505436	65
243 8673,0	-59,646700	+ 0,967579	+ 6,140214	65	243 8708,0	+ 2,674740	-57,889980	-26,092198	65
243 8673,5	-59,909553	- 5,418769	+ 3,350792	65	243 8708,5	+ 9,173172	-57,101779	-26,385125	65
243 8674,0	-59,386771	-11,735558	+ 0,515543	65	243 8709,0	+15,561159	-55,670620	-26,380787	65
243 8674,5	-58,096704	-17,900954	+ 2,327712	65	243 8709,5	+21,766666	-53,611244	-26,078532	65
243 8675,0	-56,067450	-23,837486	- 5,142105	65	243 8710,0	+27,719054	-50,944235	-25,480456	65
243 8675,5	-53,335813	-29,472885	- 7,892200	65	243 8710,5	+33,349419	-47,695961	-24,591394	65
243 8676,0	-49,946407	-34,740836	-10,544418	65	243 8711,0	+38,590990	-43,898571	-23,418974	65

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z	J.D.	x	y	z		
243 8711,5	+43,379431	-39,589952	-21,973611	65	243 8746,5	+32,206341	+43,903337	+16,380541	65
243 8712,0	+47,653339	-34,813789	-20,268603	65	243 8747,0	+25,757109	+46,863361	+18,354608	65
243 8712,5	+51,354736	-29,619641	-18,320216	65	243 8747,5	+18,894145	+49,079373	+20,037702	65
243 8713,0	+54,429688	-24,062973	-16,147736	65	243 8748,0	+11,723705	+50,505311	+21,398494	65
243 8713,5	+56,828981	-18,205161	-13,773573	65	243 8748,5	+ 4,360810	+51,109926	+22,411403	65
243 8714,0	+58,509067	-12,113493	-11,223336	65	243 8749,0	- 3,073714	+50,878339	+23,057573	65
243 8714,5	+59,433007	- 5,860992	- 8,525864	65	243 8749,5	-10,456616	+49,812802	+23,325579	65
243 8715,0	+59,571629	+ 0,473864	- 5,713199	65	243 8750,0	-17,665789	+47,932782	+23,211801	65
243 8715,5	+58,904786	+ 6,807684	- 2,820497	65	243 8750,5	-24,583769	+45,274166	+22,720437	65
243 8716,0	+57,422610	+13,052896	+ 0,114197	65	243 8751,0	-31,100898	+41,887815	+21,863163	65
243 8716,5	+55,126936	+19,118873	+ 3,050296	65	243 8751,5	-37,117994	+37,837567	+20,658526	65
243 8717,0	+52,032397	+24,913321	+ 5,945174	65	243 8752,0	-42,548323	+33,197818	+19,131051	65
243 8717,5	+48,167611	+30,344117	+ 8,754885	65	243 8752,5	-47,318904	+28,050968	+17,310230	65
243 8718,0	+43,575690	+35,321338	+11,435001	65	243 8753,0	-51,371160	+22,484907	+15,229475	65
243 8718,5	+38,314611	+39,759694	+13,941669	65	243 8753,5	-54,660987	+16,590644	+12,925050	65
243 8719,0	+32,456790	+43,580966	+16,232738	65	243 8754,0	-57,158277	+10,460171	+10,435082	65
243 8719,5	+26,088107	+46,716525	+18,268981	65	243 8754,5	-58,846207	+4,184694	+7,798679	65
243 8720,0	+19,306264	+49,109610	+20,015279	65	243 8755,0	-59,720237	+ 2,146817	+ 5,055199	65
243 8720,5	+12,218499	+50,717238	+21,441705	65	243 8755,5	-59,787053	+ 8,448769	+ 2,243611	65
243 8721,0	+ 4,938874	+51,511690	+22,524452	65	243 8756,0	-59,063393	-14,639818	-0,597986	65
243 8721,5	- 2,414843	+51,481166	+23,246434	65	243 8756,5	-57,575038	-20,643483	- 3,432765	65
243 8722,0	- 9,724302	+50,630039	+23,597729	65	243 8757,0	-55,355707	-26,388592	- 6,225469	65
243 8722,5	-16,873671	+48,978175	+23,575574	65	243 8757,5	-52,446133	-31,809588	- 8,942639	65
243 8723,0	-23,752405	+46,559945	+23,184212	65	243 8758,0	-48,893238	-36,846729	-11,552800	65
243 8723,5	-30,257648	+43,422658	+22,434424	65	243 8758,5	-44,749331	-41,446239	-14,026599	65
243 8724,0	-36,296101	+39,624742	+21,342913	65	243 8759,0	-40,071429	-45,560392	-16,336924	65
243 8724,5	-41,785376	+35,233735	+19,931543	65	243 8759,5	-34,920620	-49,147600	-18,458989	65
243 8725,0	-46,654890	+30,324339	+18,226560	65	243 8760,0	-29,361452	-52,172446	-20,370435	65
243 8725,5	-50,846316	+24,976489	+16,257774	65	243 8760,5	-23,461434	-54,605847	-22,051430	65
243 8726,0	-54,313617	+19,273542	+14,057757	65	243 8761,0	-17,290383	-56,424931	-23,484703	65
243 8726,5	-57,022907	+13,300729	+11,661140	65	243 8761,5	-10,919964	-57,613217	-24,655652	65
243 8727,0	-58,952016	+7,143737	+9,103927	65	243 8762,0	- 4,423124	-58,160625	-25,552408	65
243 8727,5	-60,089913	+ 0,887482	+ 6,422907	65	243 8762,5	+ 2,126484	-58,063400	-26,165882	65
243 8728,0	-60,436180	- 5,384885	+ 3,655148	65	243 8763,0	+ 8,655024	-57,324219	-26,489834	65
243 8728,5	-60,000188	-11,592867	+ 0,837515	65	243 8763,5	+15,089052	-55,952052	-26,520902	65
243 8729,0	-58,800535	-17,659370	- 1,993705	65	243 8764,0	+21,356076	-53,962121	-26,258610	65
243 8729,5	-56,864222	-23,511310	- 4,803174	65	243 8764,5	+27,385128	-51,375833	-25,705422	65
243 8730,0	-54,226043	-29,080180	- 7,556813	65	243 8765,0	+33,107338	-48,220605	-24,866695	65
243 8730,5	-50,927788	-34,302475	-10,222060	65	243 8765,5	+38,456449	-44,529700	-23,750687	65
243 8731,0	-47,017636	-39,120126	-12,768141	65	243 8766,0	+43,369381	-40,342011	-22,368493	65
243 8731,5	-42,549402	-43,480818	-15,166275	65	243 8766,5	+47,786766	-35,701881	-20,734024	65
243 8732,0	-37,581844	-47,338272	-17,389876	65	243 8767,0	+51,653434	-30,658802	-18,863933	65
243 8732,5	-32,177991	-50,652502	-19,414734	65	243 8767,5	+54,918973	-25,267209	-16,777568	65
243 8733,0	-26,404402	-53,389939	-21,219153	65	243 8768,0	+57,538214	-19,586160	-14,496871	65
243 8733,5	-20,330481	-55,523572	-22,784061	65	243 8768,5	+59,471782	-13,679049	-12,046327	65
243 8734,0	-14,027819	-57,033035	-24,093150	65	243 8769,0	+60,686579	- 7,613267	- 9,452828	65
243 8734,5	- 7,569475	-57,904571	-25,132901	65	243 8769,5	+61,156407	- 1,459858	- 6,745612	65
243 8735,0	- 1,029367	-58,130986	-25,892643	65	243 8770,0	+60,862547	+4,706898	- 3,956111	65
243 8735,5	+ 5,518355	-57,711629	-26,364607	65	243 8770,5	+59,794393	+10,809950	- 1,117813	65
243 8736,0	+11,999892	-56,652212	-26,543884	65	243 8771,0	+57,950187	+16,770057	+ 1,733926	65
243 8736,5	+18,342340	-54,964686	-26,428464	65	243 8771,5	+55,337677	+22,506467	+ 4,562116	65
243 8737,0	+24,474178	-52,667035	-26,019146	65	243 8772,0	+51,974948	+27,937802	+ 7,328456	65
243 8737,5	+30,325763	-49,783212	-25,319606	65	243 8772,5	+47,890998	+32,983037	+ 9,993720	65
243 8738,0	+35,829749	-46,342864	-24,336285	65	243 8773,0	+43,126490	+37,562795	+12,518252	65
243 8738,5	+40,921503	-42,381222	-23,078395	65	243 8773,5	+37,734219	+41,600856	+14,862599	65
243 8739,0	+45,535979	-37,939005	-21,557930	65	243 8774,0	+31,779308	+45,025797	+16,988245	65
243 8739,5	+49,626053	-33,062188	-19,789587	65	243 8774,5	+25,339201	+47,772970	+18,858473	65
243 8740,0	+53,127072	-27,802002	-17,790824	65	243 8775,0	+18,503154	+49,786546	+20,439356	65
243 8740,5	+55,993279	-22,214771	-15,581828	65	243 8775,5	+11,371195	+51,021621	+21,700787	65
243 8741,0	+58,180370	-16,361806	-13,185527	65	243 8776,0	+ 4,052515	+51,446197	+22,617536	65
243 8741,5	+59,649806	-10,309305	-10,627622	65	243 8776,5	- 3,336723	+51,043007	+23,170293	65
243 8742,0	+60,369432	-4,128146	- 7,936545	65	243 8777,0	-10,676168	+49,810763	+23,346493	65
243 8742,5	+60,314455	+ 2,106362	- 5,143460	65	243 8777,5	-17,844461	+47,764921	+23,140986	65
243 8743,0	+59,468223	+ 8,314878	-2,282160	65	243 8778,0	-24,722691	+44,937751	+22,556407	65
243 8743,5	+57,823417	+14,414571	+ 0,611065	65	243 8778,5	-31,197832	+41,377532	+21,603160	65
243 8744,0	+55,382992	+20,319891	+ 3,497665	65	243 8779,0	-37,165976	+37,147142	+20,299113	65
243 8744,5	+52,161426	+25,943624	+ 6,337176	65	243 8779,5	-42,535035	+32,321904	+18,668887	65
243 8745,0	+48,185648	+31,198199	+ 9,087724	65	243 8780,0	-47,226879	+26,987082	+16,742958	65
243 8745,5	+43,495987	+35,997376	+11,706672	65	243 8780,5	-51,178652	+21,235071	+14,556521	65
243 8746,0	+38,146730	+40,258215	+14,151450	65	243 8781,0	-54,343344	+15,162568	+12,148284	65

J.D.	x	y	z	J.D.	x	y	z		
243 8781,5	-56,689781	+ 8,867946	+ 9,559282	65	243 8816,5	- 5,040819	-57,723075	-25,624188	65
243 8782,0	-58,201870	+ 2,448858	+ 6,831741	65	243 8817,0	+ 1,474958	-57,755579	-26,262091	65
243 8782,5	-58,877586	- 3,999711	+ 4,008082	65	243 8817,5	+ 7,979481	-57,130619	-26,600997	65
243 8783,0	-58,727628	-10,387029	+ 1,130099	65	243 8818,0	+14,399847	-55,857610	-26,638079	65
243 8783,5	-57,773903	-16,627766	- 1,761720	65	243 8818,5	+20,664096	-53,951776	-26,373250	65
243 8784,0	-56,048049	-22,642775	- 4,628698	65	243 8819,0	+26,701620	-51,434315	-25,809254	65
243 8784,5	-53,590033	-28,359604	- 7,434317	65	243 8819,5	+32,443553	-48,332281	-24,951682	65
243 8785,0	-50,446813	-33,712729	-10,144476	65	243 8820,0	+37,823235	-44,678616	-23,809019	65
243 8785,5	-46,671178	-38,643635	-12,727642	65	243 8820,5	+42,776769	-40,512136	-22,392682	65
243 8786,0	-42,320774	-43,100795	-15,154928	65	243 8821,0	+47,243605	-35,877457	-20,717066	65
243 8786,5	-37,457156	-47,039502	-17,400120	65	243 8821,5	+51,167182	-30,824864	-18,799537	65
243 8787,0	-32,145168	-50,421810	-19,439723	65	243 8822,0	+54,495685	-25,410164	-16,660424	65
243 8787,5	-26,452233	-53,216313	-21,252917	65	243 8822,5	+57,182746	-19,694367	-14,322973	65
243 8788,0	-20,447866	-55,398057	-22,821584	65	243 8823,0	+59,188294	-13,743341	-11,813240	65
243 8788,5	-14,203160	-56,948367	-24,130273	65	243 8823,5	+60,479275	- 7,627273	- 9,159938	65
243 8789,0	- 7,790395	-57,854837	-25,166229	65	243 8824,0	+61,030377	-14,20067	- 6,394231	65
243 8789,5	-1,282601	-58,111264	-25,919421	65	243 8824,5	+60,824805	+ 4,801377	- 3,549472	65
243 8790,0	+ 5,246868	-57,717599	-26,382557	65	243 8825,0	+59,854908	+10,958034	- 0,660872	65
243 8790,5	+11,724748	-56,679907	-26,551109	65	243 8825,5	+58,122622	+16,969682	+ 2,234883	65
243 8791,0	+18,078338	-55,010434	-26,423393	65	243 8826,0	+55,639966	+22,755952	+ 5,100060	65
243 8791,5	+24,235979	-52,727541	-26,000578	65	243 8826,5	+52,429251	+28,237438	+ 7,896366	65
243 8792,0	+30,127586	-49,855710	-25,286770	65	243 8827,0	+48,523217	+33,336824	+10,585448	65
243 8792,5	+35,685196	-46,425424	-24,288979	65	243 8827,5	+43,965068	+37,980137	+13,129465	65
243 8793,0	+40,843573	-42,473134	-23,017184	65	243 8828,0	+38,808150	+42,097898	+15,491635	65
243 8793,5	+45,540857	-38,041108	-21,484322	65	243 8828,5	+33,115691	+45,626379	+17,636850	65
243 8794,0	+49,719142	-33,177170	-19,706232	65	243 8829,0	+26,960165	+48,508737	+19,532239	65
243 8794,5	+53,325149	-27,934463	-17,701607	65	243 8829,5	+20,422647	+50,696275	+21,147810	65
243 8795,0	+56,310904	-22,371145	-15,491927	65	243 8830,0	+13,591834	+52,149482	+22,457032	65
243 8795,5	+58,634321	-16,549948	-13,101330	65	243 8830,5	+ 6,562940	+52,839096	+23,437408	65
243 8796,0	+60,259881	-10,537755	-10,556472	65	243 8831,0	- 0,563636	+52,747005	+24,071034	65
243 8796,5	+61,159164	- 4,405052	- 7,886332	65	243 8831,5	- 7,683837	+51,867088	+24,345114	65
243 8797,0	+61,311427	+ 1,774642	- 5,122026	65	243 8832,0	-14,691697	+50,205779	+24,523933	65
243 8797,5	+60,704191	+ 7,925417	- 2,296556	65	243 8832,5	-21,481269	+47,782421	+23,791512	65
243 8798,0	+59,333627	+13,969659	+ 0,555447	65	243 8833,0	-27,948708	+44,629421	+22,967275	65
243 8798,5	+57,205097	+19,828836	+ 3,398036	65	243 8833,5	-33,994443	+40,791910	+21,790688	65
243 8799,0	+54,333525	+25,424308	+ 6,194280	65	243 8834,0	-39,525411	+36,327208	+20,278962	65
243 8799,5	+50,743792	+30,678263	+ 8,906634	65	243 8834,5	-44,457152	+31,303759	+18,455200	65
243 8800,0	+46,470963	+35,514686	+11,497375	65	243 8835,0	-48,715795	+25,799765	+16,347987	65
243 8800,5	+41,560599	+39,860514	+13,929077	65	243 8835,5	-52,239729	+19,901474	+13,990753	65
243 8801,0	+36,068796	+43,646846	+16,165172	65	243 8836,0	-54,980836	+13,701142	+11,420965	65
243 8801,5	+30,062062	+46,810209	+18,170521	65	243 8836,5	-56,905426	+ 7,294905	+ 8,679264	65
243 8802,0	+23,617132	+49,294060	+19,912111	65	243 8837,0	-57,994488	+ 0,780494	+ 5,808420	65
243 8802,5	+16,820360	+51,050232	+21,359786	65	243 8837,5	-58,243617	+ 5,744939	+ 2,852346	65
243 8803,0	+ 9,766885	+52,040481	+22,487001	65	243 8838,0	-57,662340	-12,186862	- 0,144892	65
243 8803,5	+ 2,559391	+52,237931	+23,271625	65	243 8838,5	-56,273115	-18,455135	- 3,139992	65
243 8804,0	- 4,693513	+51,628531	+23,696726	65	243 8839,0	-54,110102	-24,465506	- 6,091203	65
243 8804,5	-11,879326	+50,212117	+23,751280	65	243 8839,5	-51,217588	-30,140695	- 8,958981	65
243 8805,0	-18,884088	+48,003287	+23,430786	65	243 8840,0	-47,648516	-35,411260	-11,706525	65
243 8805,5	-25,595095	+45,031704	+22,737666	65	243 8840,5	-43,462852	-40,216008	-14,300113	65
243 8806,0	-31,903786	+41,341935	+21,681483	65	243 8841,0	-38,726071	-44,502198	-16,709354	65
243 8806,5	-37,708663	+36,992645	+20,278856	65	243 8841,5	-33,507894	-48,225585	-18,907311	65
243 8807,0	-42,918037	+32,055267	+18,553124	65	243 8842,0	-27,880986	-51,350155	-20,870533	65
243 8807,5	-47,452396	+26,612027	+16,533687	65	243 8842,5	-21,919957	-53,847829	-22,578984	65
243 8808,0	-51,246285	+20,753651	+14,255162	65	243 8843,0	-15,700536	-55,698183	-24,016030	65
243 8808,5	-54,249594	+14,576778	+11,756322	65	243 8843,5	- 9,298828	-56,887940	-25,168253	65
243 8809,0	-56,428049	+ 8,181231	+ 9,078930	65	243 8844,0	- 2,790783	-57,410696	-26,025395	65
243 8809,5	-57,763197	+ 1,667461	+ 6,266572	65	243 8844,5	+ 3,748254	-57,266523	-26,580212	65
243 8810,0	-58,251708	- 4,865824	+ 3,363525	65	243 8845,0	+10,243923	-56,461678	-26,828385	65
243 8810,5	-57,904299	-11,323671	+ 0,413734	65	243 8845,5	+16,623138	-55,008408	-26,768458	65
243 8811,0	-56,744316	-17,616512	- 2,540047	65	243 8846,0	+22,814369	-52,924716	-26,401766	65
243 8811,5	-54,806058	-23,661343	- 5,456961	65	243 8846,5	+28,747941	-50,234319	-25,732434	65
243 8812,0	-52,133238	-29,382561	- 8,298576	65	243 8847,0	+34,356300	-46,966501	-24,767352	65
243 8812,5	-48,777257	-34,712403	-11,029244	65	243 8847,5	+39,574388	-43,156140	-23,516219	65
243 8813,0	-44,795827	-39,591163	-13,616337	65	243 8848,0	+44,340053	-38,843693	-21,991578	65
243 8813,5	-40,251563	-43,967153	-16,030379	65	243 8848,5	+48,594521	-34,075164	-20,208842	65
243 8814,0	-35,210852	-47,796511	-18,245054	65	243 8849,0	+52,282974	-28,902083	-18,186353	65
243 8814,5	-29,742904	-51,042967	-20,237199	65	243 8849,5	+55,355226	-23,381423	-15,945407	65
243 8815,0	-23,918972	-53,677571	-21,986771	65	243 8850,0	+57,766429	-17,575423	-13,510228	65
243 8815,5	-17,811622	-55,678264	-23,476710	65	243 8850,5	+59,477989	-11,551362	-10,907978	65
243 8816,0	-11,494296	-57,029732	-24,692923	65	243 8851,0	+60,458320	- 5,381091	- 8,168591	65

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z	J.D.	x	y	z		
243 8851,5	+60,683852	+ 0,859459	- 5,324658	65	243 8886,5	-15,071681	+49,860765	+24,589741	65
243 8852,0	+60,139880	+ 7,091045	- 2,411149	65	243 8887,0	-21,905036	+47,566536	+24,188505	65
243 8852,5	+58,821352	+13,232005	+ 0,534904	65	243 8887,5	-28,402727	+44,553910	+23,421716	65
243 8853,0	+56,733704	+19,199349	+ 3,474862	65	243 8888,0	-34,469643	+40,871576	+22,302656	65
243 8853,5	+53,893305	+24,910000	+ 6,368969	65	243 8888,5	-40,018872	+36,578413	+20,850138	65
243 8854,0	+50,327915	+30,282182	+ 9,176968	65	243 8889,0	-44,973080	+31,742153	+19,087998	65
243 8854,5	+46,076754	+35,236877	+11,858765	65	243 8889,5	-49,265561	+26,437864	+17,044516	65
243 8855,0	+41,190366	+39,699362	+14,375139	65	243 8890,0	-52,841021	+20,746413	+14,751770	65
243 8855,5	+35,730190	+43,600719	+16,688490	65	243 8890,5	-55,656065	+14,752911	+12,244961	65
243 8856,0	+29,767800	+46,879272	+18,763563	65	243 8891,0	-57,679520	+ 8,545207	+ 9,561758	65
243 8856,5	+23,383961	+49,481965	+20,568182	65	243 8891,5	-58,892467	+ 2,212379	+ 6,741596	65
243 8857,0	+16,667325	+51,365471	+22,073882	65	243 8892,0	-59,288103	- 4,156666	+ 3,825018	65
243 8857,5	+ 9,713027	+52,497243	+23,256527	65	243 8892,5	-58,871342	-10,474547	+ 0,852998	65
243 8858,0	+ 2,621046	+52,856210	+24,096793	65	243 8893,0	-57,658419	-16,656652	- 2,133656	65
243 8858,5	- 4,505505	+52,433391	+24,580616	65	243 8893,5	-55,676101	-22,622272	- 5,094920	65
243 8859,0	-11,562203	+51,232072	+24,699443	65	243 8894,0	-52,960988	-28,295628	- 7,992092	65
243 8859,5	-18,445162	+49,267965	+24,450496	65	243 8894,5	-49,558501	-33,606708	-10,788281	65
243 8860,0	-25,052872	+46,568892	+23,836801	65	243 8895,0	-45,521969	-38,492062	-13,448853	65
243 8860,5	-31,288012	+43,174405	+22,867183	65	243 8895,5	-40,911484	-42,895317	-15,941801	65
243 8861,0	-37,059181	+39,135088	+21,556122	65	243 8896,0	-35,792808	-46,767626	-18,238051	65
243 8861,5	-42,282531	+34,511672	+19,923494	65	243 8896,5	-30,236287	-50,067936	-20,311686	65
243 8862,0	-46,883282	+29,373926	+17,994217	65	243 8897,0	-24,315706	-52,763083	-22,140115	65
243 8862,5	-50,797024	+23,799373	+15,797780	65	243 8897,5	-18,107273	-54,827803	-23,704160	65
243 8863,0	-53,970790	+17,871780	+13,367647	65	243 8898,0	-11,688650	-56,244608	-24,988117	65
243 8863,5	-56,363956	+11,679593	+10,740647	65	243 8898,5	- 5,138029	-57,003539	-25,979710	65
243 8864,0	-57,948678	+ 5,314224	+ 7,956192	65	243 8899,0	+ 1,466627	-57,101895	-26,670053	65
243 8864,5	-58,710345	- 1,131676	+ 5,055561	65	243 8899,5	+ 8,048300	-56,543933	-27,053576	65
243 8865,0	-58,647292	- 7,565967	+ 2,081039	65	243 8900,0	+14,531502	-55,340438	-27,127892	65
243 8865,5	-57,770563	-13,898657	- 0,924837	65	243 8900,5	+20,842766	-53,508422	-26,893686	65
243 8866,0	-56,103207	-20,043450	- 3,920081	65	243 8901,0	+26,911081	-51,070779	-26,354628	65
243 8866,5	-53,679308	-25,919083	- 6,863952	65	243 8901,5	+32,668258	-48,055968	-25,517235	65
243 8867,0	-50,542928	-31,450475	- 9,717583	65	243 8902,0	+38,049231	-44,497729	-24,390785	65
243 8867,5	-46,746792	-36,569618	-12,444540	65	243 8902,5	+42,992380	-40,434870	-22,987246	65
243 8868,0	-42,350968	-41,216243	-15,011230	65	243 8903,0	+47,439749	-35,911023	-21,321180	65
243 8868,5	-37,421464	-45,338212	-17,387233	65	243 8903,5	+51,337453	-30,974576	-19,409760	65
243 8869,0	-32,028933	-48,891710	-19,545513	65	243 8904,0	+54,635949	-25,678485	-17,272700	65
243 8869,5	-26,247402	-51,841250	-21,462546	65	243 8904,5	+57,290416	-20,080187	-14,932267	65
243 8870,0	-20,153176	-54,159555	-23,118358	65	243 8905,0	+59,261326	-14,241514	-12,413285	65
243 8870,5	-13,823775	-55,827212	-24,496484	65	243 8905,5	+60,514948	- 8,228555	- 9,743124	65
243 8871,0	- 7,337137	-56,832439	-25,583933	65	243 8906,0	+61,023988	- 2,111442	- 6,951665	65
243 8871,5	- 0,770852	-57,170586	-26,371040	65	243 8906,5	+60,768438	+ 4,035900	- 4,071269	65
243 8872,0	+ 5,798413	-56,843834	-26,851367	65	243 8907,0	+59,736391	+10,136174	- 1,136663	65
243 8872,5	+12,295384	-55,860780	-27,021572	65	243 8907,5	+57,924986	+16,109299	+ 1,815251	65
243 8873,0	+18,446583	-54,236130	-26,881305	65	243 8908,0	+55,341312	+21,873188	+ 4,745651	65
243 8873,5	+24,780637	-51,990357	-26,433086	65	243 8908,5	+52,003431	+27,344790	+ 7,614201	65
243 8874,0	+30,628572	-49,149508	-25,682231	65	243 8909,0	+47,941104	+32,441358	+10,379542	65
243 8874,5	+36,124099	-45,745074	-24,636833	65	243 8909,5	+43,196583	+37,082057	+12,999997	65
243 8875,0	+41,203814	-41,813717	-23,307664	65	243 8910,0	+37,824835	+14,189711	+15,434321	65
243 8875,5	+45,807641	-37,397379	-21,708246	65	243 8910,5	+31,893619	+44,692814	+17,642661	65
243 8876,0	+49,879037	-32,543058	-19,854793	65	243 8911,0	+25,482980	+47,527640	+19,587560	65
243 8876,5	+53,365561	-27,302902	-17,766302	65	243 8911,5	+18,684220	+49,640267	+21,235015	65
243 8877,0	+56,219355	-21,734106	-15,464548	65	243 8912,0	+11,598335	+50,988487	+22,555516	65
243 8877,5	+58,397744	-15,898819	-12,974109	65	243 8912,5	+ 4,333975	+51,543486	+23,525020	65
243 8878,0	+59,864034	- 9,864025	-10,322387	65	243 8913,0	- 2,995093	+51,290966	+24,125721	65
243 8878,5	+60,588221	- 3,701240	- 7,539537	65	243 8913,5	-10,272777	+50,231850	+24,346669	65
243 8879,0	+60,548080	+ 2,513830	- 4,658408	65	243 8914,0	-17,383586	+48,382347	+24,184059	65
243 8879,5	+59,729981	+ 8,701903	- 1,714355	65	243 8914,5	-24,215528	+45,773454	+23,641311	65
243 8880,0	+58,129919	+14,780888	+ 1,255032	65	243 8915,0	-30,662793	+42,449970	+22,728862	65
243 8880,5	+55,754459	+20,666891	+ 4,210293	65	243 8915,5	-36,628099	+38,468994	+21,463700	65
243 8881,0	+52,621531	+26,275455	+ 7,110593	65	243 8916,0	-42,024560	+33,898158	+19,868726	65
243 8881,5	+48,761083	+31,523029	+ 9,914352	65	243 8916,5	-46,777126	+28,813653	+17,971979	65
243 8882,0	+44,215408	+36,328615	+12,579955	65	243 8917,0	-50,823503	+23,298202	+15,805794	65
243 8882,5	+39,039254	+40,615604	+15,066610	65	243 8917,5	-54,114638	+17,439062	+13,405902	65
243 8883,0	+33,299384	+44,313602	+17,335226	65	243 8918,0	-56,614817	+11,326119	+10,810568	65
243 8883,5	+27,073817	+47,360274	+19,349342	65	243 8918,5	-58,301404	+ 5,050161	+ 8,059764	65
243 8884,0	+20,450608	+49,703049	+21,076041	65	243 8919,0	-59,164451	- 1,298641	+ 5,194416	65
243 8884,5	+13,526253	+51,300599	+22,486791	65	243 8919,5	-59,205961	- 7,632103	+2,255698	65
243 8885,0	+ 6,403755	+52,124026	+23,558176	65	243 8920,0	-58,439169	-13,865144	- 0,715547	65
243 8885,5	- 0,809571	+52,157645	+24,272484	65	243 8920,5	-56,887665	-19,916779	- 3,679367	65
243 8886,0	- 8,004387	+51,399378	+24,618094	65	243 8921,0	-54,584498	-25,710917	- 6,597155	65

RECTANGULAR COORDINATES OF THE MOON 1952-1971

J.D.	x	y	z	J.D.	x	y	z	
243 8921,5	-51,571302	-31,177068	- 9,432066	65	243 8946,5	-58,682164	- 4,340439 + 3,655318	66
243 8922,0	-47,897276	-36,250851	-12,149349	65	243 8947,0	-58,408477	-10,696695 + 0,673921	66
243 8922,5	-43,618284	-40,874449	-14,716646	65	243 8947,5	-57,322308	-16,903675 - 2,316673	66
243 8923,0	-38,795951	-44,996969	-17,104263	65	243 8948,0	-55,455157	-22,881154 - 5,276052	66
243 8923,5	-33,496725	-48,574689	-19,285363	65	243 8948,5	-52,847467	-28,555229 - 8,165884	66
243 8924,0	-27,790926	-51,571189	-21,236116	65	243 8949,0	-49,547401	-33,858756 -10,950222	66
243 8924,5	-21,751922	-53,957488	-22,935866	65	243 8949,5	-45,609775	-38,731665 -13,595776	66
243 8925,0	-15,455230	-55,712038	-24,367193	65	243 8950,0	-41,094902	-43,121038 -16,072048	66
243 8925,5	- 8,977669	-56,820609	-25,515949	65	243 8950,5	-36,067747	-46,981264 -18,351490	66
243 8926,0	- 2,396598	-57,276222	-26,371314	65	243 8951,0	-30,596999	-50,273993 -20,409583	66
243 8926,5	+ 4,210836	-57,078906	-26,925743	65	243 8951,5	-24,754262	-52,968107 -22,224892	66
243 8927,0	+10,768368	-56,235512	-27,174952	65	243 8952,0	-18,613352	-55,039682 -23,779127	66
243 8927,5	+17,201268	-54,759402	-27,117834	65	243 8952,5	-12,249550	-56,471851 -25,057144	66
243 8928,0	+23,436882	-52,670135	-26,756375	65	243 8953,0	- 5,738980	-57,254754 -26,046985	66
243 8928,5	+29,405169	-49,993196	-26,095568	65	243 8953,5	+ 0,842062	-57,385363 -26,739866	66
243 8929,0	+35,039116	-46,759618	-25,143293	65	243 8954,0	+ 7,417707	-56,867298 -27,130143	66
243 8929,5	+40,275136	-43,005692	-23,910206	65	243 8954,5	+13,913093	-55,710692 -27,215305	66
243 8930,0	+45,053482	-38,772677	-22,409661	65	243 8955,0	+20,254950	-53,931997 -26,995957	66
243 8930,5	+49,318526	-34,106503	-20,657582	65	243 8955,5	+26,372108	-51,553673 -26,475696	66
243 8931,0	+53,019089	-29,057501	-18,672380	65	243 8956,0	+32,196076	-48,604049 -25,661133	66
243 8931,5	+56,108839	-23,680217	-16,474902	65	243 8956,5	+37,661486	-45,116951 -24,561745	66
243 8932,0	+58,546541	-18,033124	-14,088327	65	243 8957,0	+42,706613	-41,131475 -23,189821	66
243 8932,5	+60,296510	-12,178467	-11,538121	65	243 8957,5	+47,273752	-36,691615 -21,560332	66
243 8933,0	+61,329006	- 6,182025	- 8,851988	65	243 8958,0	+51,309686	-31,845984 -19,690837	66
243 8933,5	+61,620773	- 0,112889	- 6,059802	65	243 8958,5	+54,766074	-26,647484 -17,601366	66
243 8934,0	+61,155559	+ 5,956834	- 3,193528	65	243 8959,0	+57,599771	-21,152932 -15,314293	66
243 8934,5	+59,924789	+11,952362	- 0,287118	65	243 8959,5	+59,773254	-15,422788 -12,854223	66
243 8935,0	+57,928368	+17,796725	+ 2,623618	65	243 8960,0	+61,255001	- 9,520783 -10,247876	66
243 8935,5	+55,175332	+23,411359	+ 5,501248	65	243 8960,5	+62,019845	- 3,513593 - 7,523956	66
243 8936,0	+51,684774	+28,716930	+ 8,306998	65	243 8961,0	+62,049351	+ 2,529548 - 4,713018	66
243 8936,5	+47,486599	+33,634342	+11,001148	65	243 8961,5	+61,332306	+ 8,537215 - 1,847321	66
243 8937,0	+42,622212	+38,086003	+13,543568	65	243 8962,0	+59,865161	+14,436232 + 1,039315	66
243 8937,5	+37,145089	+41,997354	+15,894359	65	243 8962,5	+57,652464	+20,152166 + 3,911701	66
243 8938,0	+31,121040	+45,298619	+18,014654	65	243 8963,0	+54,707450	+25,609896 + 6,733509	66
243 8938,5	+24,628142	+47,926837	+19,867560	65	243 8963,5	+51,052650	+30,734351 + 9,467536	66
243 8939,0	+17,756124	+49,827857	+21,419159	65	243 8964,0	+46,720333	+35,451301 +12,076043	66
243 8939,5	+10,605282	+50,958561	+22,639634	65	243 8964,5	+41,753095	+39,688397 +14,521190	66
243 8940,0	+ 3,284731	+51,288728	+23,504309	65	243 8965,0	+36,204289	+43,376401 +16,765563	66
243 8940,5	- 4,089896	+50,802713	+23,994666	65	243 8965,5	+30,138251	+46,450545 +18,772791	66
243 8941,0	-11,399255	+49,500630	+24,099149	65	243 8966,0	+23,630369	+48,852167 +20,508311	66
243 8941,5	-18,523456	+47,398920	+23,813758	65	243 8966,5	+16,766793	+50,530504 +21,940228	66
243 8942,0	-25,345421	+44,530254	+23,142315	65	243 8967,0	+ 9,643669	+51,444469 +23,040211	66
243 8942,5	-31,754128	+40,942675	+22,096378	65	243 8967,5	+ 2,365997	+51,564654 +23,784552	66
243 8943,0	-37,647617	+36,698120	+20,694868	65	243 8968,0	- 4,954189	+50,874917 +24,155070	66
243 8943,5	-42,935504	+31,870441	+18,963361	65	243 8968,5	-12,200101	+49,373988 +24,140084	66
243 8944,0	-47,540865	+26,542970	+16,933168	65	243 8969,0	-19,253014	+47,076379 +23,735091	66
243 8944,5	-51,401474	+20,805992	+14,640262	65	243 8969,5	-25,995447	+44,012869 +22,943319	66
243 8945,0	-54,470387	+14,754162	+12,124139	65	243 8970,0	-32,314528	+40,230241 +21,775891	66
243 8945,5	-56,715899	+ 8,484087	+ 9,426677	65	243 8970,5	-38,105341	+35,790298 +20,251717	66
243 8946,0	-58,121049	+ 2,092155	+ 6,591104	65	243 8971,0	-43,273913	+30,768106 +18,396933	66
243 8946,5	-58,682777	- 4,327323	+ 3,661020	65	243 8971,5	-47,739806	+25,249796 +16,244131	66
Epoch 1966.0								
243 8938,0	+31,109164	+45,305573	+18,017677	66	243 8972,0	-51,437945	+19,329820 +13,831258	66
243 8938,5	+24,615499	+47,932340	+19,869952	66	243 8972,5	-54,319741	+13,108079 +11,200365	66
243 8939,0	+17,742905	+49,831825	+21,420883	66	243 8973,0	-56,353427	+ 6,687034 + 8,396298	66
243 8939,5	+10,591693	+50,960930	+22,640663	66	243 8973,5	-57,523671	+ 0,168996 + 5,465403	66
243 8940,0	+ 3,270984	+51,289461	+23,504627	66	243 8974,0	-57,830756	- 6,346221 + 2,454345	66
243 8940,5	- 4,103582	+50,801798	+23,994268	66	243 8974,5	-57,289142	-12,763253 - 0,590951	66
243 8941,0	-11,412660	+49,498081	+24,098040	66	243 8975,0	-55,925946	-18,992721 - 3,626135	66
243 8941,5	-18,536364	+47,394779	+23,811958	66	243 8975,5	-53,779202	-24,952278 - 6,609115	66
243 8942,0	-25,357622	+44,524588	+23,139851	66	243 8976,0	-50,896213	-30,567341 - 9,500543	66
243 8942,5	-31,765425	+40,935577	+22,093291	66	243 8976,5	-47,331874	-35,771448 -12,264132	66
243 8943,0	-37,657829	+36,689705	+20,691209	66	243 8977,0	-43,147299	-40,506433 -14,866895	66
243 8943,5	-42,944468	+31,860844	+18,959189	66	243 8977,5	-38,408403	-44,722333 -17,279217	66
243 8944,0	-47,548442	+26,532343	+16,928548	66	243 8978,0	-33,184899	-48,377313 -19,474913	66
243 8944,5	-51,407545	+20,794503	+14,635267	66	243 8978,5	-27,549190	-51,437334 -21,431198	66
243 8945,0	-54,474861	+14,741987	+12,118846	66	243 8979,0	-21,575632	-53,875952 -23,128649	66
243 8945,5	-56,718709	+ 8,471411	+ 9,421166	66	243 8979,5	-15,339788	-55,674022 -24,551150	66
243 8946,0	-58,122155	+ 2,079165	+ 6,585457	66	243 8980,0	- 8,917827	-56,819469 -25,685837	66
					243 8980,5	- 2,385958	-57,306949 -26,522995	66
					243 8981,0	+ 4,180054	-57,137733 -27,056056	66

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z	J.D.	x	y	z		
243 8981,5	+10,705359	-56,319446	-27,281520	66	243 9016,5	+60,026371	+14,581746	+1,511604	66
243 8982,0	+17,116474	-54,865868	-27,198904	66	243 9017,0	+57,907758	+20,335030	+4,426843	66
243 8982,5	+23,341763	-52,796838	-26,810744	66	243 9017,5	+55,075943	+25,831894	+7,285838	66
243 8983,0	+29,311850	-50,137912	-26,122468	66	243 9018,0	+51,556725	+30,999542	+10,051702	66
243 8983,5	+34,960122	-46,920321	-25,142439	66	243 9018,5	+47,385049	+35,767338	+12,687731	66
243 8984,0	+40,223155	-43,180673	-23,881848	66	243 9019,0	+42,605112	+40,067828	+15,157875	66
243 8984,5	+45,041252	-38,960759	-22,354678	66	243 9019,5	+37,270146	+43,837667	+17,427188	66
243 8985,0	+49,358884	-34,307278	-20,577604	66	243 9020,0	+31,442216	+47,018627	+19,462349	66
243 8985,5	+53,125179	-29,271535	-18,569915	66	243 9020,5	+25,191894	+49,558711	+21,232197	66
243 8986,0	+56,294434	-23,909117	-16,353400	66	243 9021,0	+18,597684	+51,413057	+22,708230	66
243 8986,5	+58,826509	-18,279490	-13,952196	66	243 9021,5	+11,745407	+52,545129	+23,865222	66
243 8987,0	+60,687343	-12,445637	-11,392673	66	243 9022,0	+4,727309	+52,927631	+24,681746	66
243 8987,5	+61,849315	-6,473568	-8,703227	66	243 9022,5	-2,358976	+52,543574	+25,140779	66
243 8988,0	+62,291711	-0,431890	-5,914137	66	243 9023,0	-9,411745	+51,387120	+25,230211	66
243 8988,5	+62,001104	+5,608729	-3,057329	66	243 9023,5	-16,326726	+49,464443	+24,943408	66
243 8989,0	+60,971689	+11,576099	-0,166172	66	243 9024,0	-22,998893	+46,794268	+24,279625	66
243 8989,5	+59,205720	+17,397099	+2,724774	66	243 9024,5	-29,324458	+43,408296	+23,244404	66
243 8990,0	+56,713717	+22,998293	+5,580025	66	243 9025,0	-35,203110	+39,351231	+21,849778	66
243 8990,5	+53,514928	+28,306649	+8,363466	66	243 9025,5	-40,540344	+34,680434	+20,114336	66
243 8991,0	+49,637456	+33,250236	+11,038670	66	243 9026,0	-45,249830	+29,465167	+18,063064	66
243 8991,5	+45,118659	+37,759102	+13,569274	66	243 9026,5	-49,255738	+23,785388	+15,727008	66
243 8992,0	+40,005235	+41,766141	+15,919380	66	243 9027,0	-52,494739	+17,730064	+13,142629	66
243 8992,5	+34,353416	+45,208140	+18,054031	66	243 9027,5	-54,917785	+11,395148	+10,351027	66
243 8993,0	+28,228969	+48,026920	+19,939750	66	243 9028,0	-56,491202	+4,881175	+7,396898	66
243 8993,5	+21,707035	+50,170570	+21,545142	66	243 9028,5	-57,197459	-1,709202	+4,327414	66
243 8994,0	+14,871776	+51,594794	+22,841553	66	243 9029,0	-57,035125	-8,273802	+1,191016	66
243 8994,5	+7,815757	+52,264382	+23,803830	66	243 9029,5	-56,018340	-14,713315	-1,963801	66
243 8995,0	+0,638948	+52,154584	+24,411050	66	243 9030,0	-54,175738	-20,933472	-5,089598	66
243 8995,5	-6,552595	+51,252593	+24,647349	66	243 9030,5	-51,548949	-26,846852	-8,141001	66
243 8996,0	-13,648509	+49,558762	+24,502661	66	243 9031,0	-48,190828	-32,374291	-11,075524	66
243 8996,5	-20,536327	+47,087614	+23,973395	66	243 9031,5	-44,163524	-37,445828	-13,854202	66
243 8997,0	-27,104029	+43,868508	+23,062990	66	243 9032,0	-39,536503	-42,001253	-16,442025	66
243 8997,5	-33,242920	+39,945733	+21,782207	66	243 9032,5	-34,384730	-45,990319	-18,808214	66
243 8998,0	-38,850647	+35,378089	+20,149236	66	243 9033,0	-28,786938	-49,372627	-20,926321	66
243 8998,5	-43,834140	+30,237763	+18,189424	66	243 9033,5	-22,824103	-52,117247	-22,774184	66
243 8999,0	-48,112336	+24,608625	+15,934734	66	243 9034,0	-16,578249	-54,202354	-24,333875	66
243 8999,5	-51,618505	+18,584011	+13,422906	66	243 9034,5	-10,131324	-55,614493	-25,591456	66
243 9000,0	-54,301844	+12,264026	+10,696350	66	243 9035,0	-3,564442	-56,348165	-26,536839	66
243 9000,5	-56,128464	+5,752702	+7,800896	66	243 9035,5	+3,042793	-56,405121	-27,163536	66
243 9001,0	-57,081575	-0,844888	+4,784443	66	243 9036,0	+9,612772	-55,793888	-27,468447	66
243 9001,5	-57,161057	-7,425341	+1,695659	66	243 9036,5	+16,070264	-54,529265	-27,451699	66
243 9002,0	-56,382240	-13,889318	-1,417276	66	243 9037,0	+22,342715	-52,631900	-27,116428	66
243 9002,5	-54,774542	-20,143520	-4,507711	66	243 9037,5	+28,360483	-50,127953	-26,468686	66
243 9003,0	-52,379518	-26,102176	-7,531405	66	243 9038,0	+34,057104	-47,048861	-25,517314	66
243 9003,5	-49,248942	-31,688049	-10,447189	66	243 9038,5	+39,369488	-43,431039	-24,273861	66
243 9004,0	-45,442948	-36,833087	-13,217437	66	243 9039,0	+44,238184	-39,315729	-22,752500	66
243 9004,5	-41,028129	-41,478622	-15,808337	66	243 9039,5	+48,607739	-34,748903	-20,970050	66
243 9005,0	-36,075873	-45,575285	-18,190008	66	243 9040,0	+52,426951	-29,781028	-18,945857	66
243 9005,5	-30,661008	-49,082843	-20,336549	66	243 9040,5	+55,649422	-24,466991	-16,701833	66
243 9006,0	-24,860542	-51,969757	-22,225958	66	243 9041,0	+58,233935	-18,865854	-14,262365	66
243 9006,5	-18,752653	-54,212755	-23,840005	66	243 9041,5	+60,145014	-13,040621	-11,654258	66
243 9007,0	-12,415897	-55,796355	-25,164105	66	243 9042,0	+61,353598	-7,057950	-8,906657	66
243 9007,5	-5,928543	-56,712412	-26,187149	66	243 9042,5	+61,837518	-0,987685	-6,050874	66
243 9008,0	+0,631955	-56,959703	-26,901379	66	243 9043,0	+61,582230	+5,097618	-3,120225	66
243 9008,5	+7,189403	-56,543489	-27,302205	66	243 9043,5	+60,581413	+11,123349	-0,149775	66
243 9009,0	+13,669218	-55,475267	-27,388137	66	243 9044,0	+58,837526	+17,013608	+2,823986	66
243 9009,5	+19,998789	-53,772462	-27,160672	66	243 9044,5	+56,362282	+22,692087	+5,763501	66
243 9010,0	+26,107793	-51,458189	-26,624209	66	243 9045,0	+53,177053	+28,083059	+8,630615	66
243 9010,5	+31,928521	-48,561063	-25,785989	66	243 9045,5	+49,313128	+33,112498	+11,387057	66
243 9011,0	+37,396242	-45,115059	-24,656074	66	243 9046,0	+44,811698	+37,709204	+13,994989	66
243 9011,5	+42,449599	-41,159308	-23,247282	66	243 9046,5	+39,723790	+41,806010	+16,417596	66
243 9012,0	+47,030977	-36,737923	-21,575136	66	243 9047,0	+34,109956	+45,341049	+18,619717	66
243 9012,5	+51,087045	-31,899852	-19,657853	66	243 9047,5	+28,039657	+48,258858	+20,568426	66
243 9013,0	+54,569149	-26,698591	-17,516241	66	243 9048,0	+21,590574	+50,511555	+22,233663	66
243 9013,5	+57,433947	-21,191964	-15,173654	66	243 9048,5	+14,847678	+52,059913	+23,588834	66
243 9014,0	+59,643837	-15,441725	-12,655840	66	243 9049,0	+7,902062	+52,874198	+24,611326	66
243 9014,5	+61,167539	-9,513194	-9,990841	66	243 9049,5	+0,849708	+52,935032	+25,283022	66
243 9015,0	+61,980700	-3,474777	-7,208792	66	243 9050,0	-6,209966	+52,234000	+25,590739	66
243 9015,5	+62,066285	+2,602600	-4,341712	66	243 9050,5	-13,175621	+50,774124	+25,526588	66
243 9016,0	+61,415137	+8,646117	-1,423249	66	243 9051,0	-19,945662	+48,570131	+25,088261	66

J.D.	x	y	z	J.D.	x	y	z		
243 9051,5	-26,419932	+45,648522	+24,279221	66	243 9086,5	-42,266436	-39,889722	-15,289377	66
243 9052,0	-32,501514	+42,047468	+23,108812	66	243 9087,0	-37,264634	-44,054639	-17,757958	66
243 9052,5	-38,098488	+37,816376	+21,592220	66	243 9087,5	-31,775790	-47,646895	-19,996063	66
243 9053,0	-43,125728	+33,015307	+19,750369	66	243 9088,0	-25,878550	-50,627992	-21,977861	66
243 9053,5	-47,506664	+27,714126	+17,609658	66	243 9088,5	-19,654749	-52,968622	-23,681647	66
243 9054,0	-51,174866	+21,991312	+15,201556	66	243 9089,0	-13,188037	-54,648528	-25,089893	66
243 9054,5	-54,075467	+15,932578	+12,562058	66	243 9089,5	-6,562675	-55,656310	-26,189298	66
243 9055,0	-56,166463	+9,629272	+9,731052	66	243 9090,0	+0,137620	-55,988980	-26,970642	66
243 9055,5	-57,419511	+3,176520	+6,751495	66	243 9090,5	+6,830622	-55,651449	-27,428659	66
243 9056,0	-57,820613	-3,328691	+3,668561	66	243 9091,0	+13,436412	-54,656069	-27,561869	66
243 9056,5	-57,370146	-9,789569	+0,528665	66	243 9091,5	+19,878051	-53,021925	-27,372320	66
243 9057,0	-56,082733	-16,111489	-2,621516	66	243 9092,0	+26,082108	-50,774355	-26,865387	66
243 9057,5	-53,986507	-22,203901	-5,735993	66	243 9092,5	+31,979056	-47,944347	-26,049539	66
243 9058,0	-51,122127	-27,982043	-8,770403	66	243 9093,0	+37,503586	-44,568036	-24,936106	66
243 9058,5	-47,541388	-33,368358	-11,682800	66	243 9093,5	+42,594796	-40,686219	-23,539085	66
243 9059,0	-43,305698	-38,293652	-14,434359	66	243 9094,0	+47,196450	-36,344049	-21,874996	66
243 9059,5	-38,484368	-42,697907	-16,989917	66	243 9094,5	+51,257039	-31,590591	-19,962696	66
243 9060,0	-33,152844	-46,530740	-19,318361	66	243 9095,0	+54,730039	-26,478661	-17,823301	66
243 9060,5	-27,391004	-49,751566	-21,392860	66	243 9095,5	+57,574018	-21,064524	-15,480062	66
243 9061,0	-21,281574	-52,329511	-23,190975	66	243 9096,0	+59,752887	-15,407727	-12,958326	66
243 9061,5	-14,908685	-54,243133	-24,694656	66	243 9096,5	+61,236190	-9,570948	-10,285451	66
243 9062,0	-8,356619	-55,479895	-25,890092	66	243 9097,0	+61,999487	-3,619799	-7,490779	66
243 9062,5	-1,708776	-56,035671	-26,767601	66	243 9097,5	+62,024743	+2,377375	-4,605557	66
243 9063,0	+4,953176	-55,914058	-27,321349	66	243 9098,0	+61,300974	+8,349775	-1,662880	66
243 9063,5	+11,549965	-55,125786	-27,549142	66	243 9098,5	+59,824710	+14,224499	+1,302465	66
243 9064,0	+18,005212	-53,688187	-27,452225	66	243 9099,0	+57,600768	+19,927030	+4,254128	66
243 9064,5	+24,245808	-51,624507	-27,034981	66	243 9099,5	+54,642931	+25,381889	+7,154473	66
243 9065,0	+30,202179	-48,963533	-26,304771	66	243 9100,0	+50,974639	+30,513444	+9,964886	66
243 9065,5	+35,808529	-45,739185	-25,271773	66	243 9100,5	+46,629637	+35,246947	+12,646240	66
243 9066,0	+41,003002	-41,990149	-23,948813	66	243 9101,0	+41,652534	+39,509798	+15,159424	66
243 9066,5	+45,727852	-37,759593	-22,351259	66	243 9101,5	+36,099076	+43,232996	+17,466035	66
243 9067,0	+49,929640	-33,094985	-20,496934	66	243 9102,0	+30,036185	+46,352745	+19,529146	66
243 9067,5	+53,559484	-28,047924	-18,406072	66	243 9102,5	+23,541649	+48,812191	+21,314170	66
243 9068,0	+56,573326	-22,673979	-16,101266	66	243 9103,0	+16,703375	+50,563244	+22,789806	66
243 9068,5	+58,932288	-17,032547	-13,607433	66	243 9103,5	+9,618179	+51,568262	+23,928959	66
243 9069,0	+60,603134	-11,186702	-10,951773	66	243 9104,0	+2,390112	+51,801526	+24,709620	66
243 9069,5	+61,558778	-5,202975	-8,163733	66	243 9104,5	-4,871612	+51,250542	+25,115666	66
243 9070,0	+61,778868	+0,848938	-5,274900	66	243 9105,0	-12,055042	+49,916824	+25,137477	66
243 9070,5	+61,250446	+6,896557	-2,318891	66	243 9105,5	-19,048114	+47,816234	+24,772336	66
243 9071,0	+59,968657	+12,865138	+0,668830	66	243 9106,0	-25,741348	+44,978777	+24,024578	66
243 9071,5	+57,937415	+18,678347	+3,651215	66	243 9106,5	-32,030484	+41,447994	+22,905554	66
243 9072,0	+55,170113	+24,259087	+6,589974	66	243 9107,0	-37,818852	+37,279773	+21,433252	66
243 9072,5	+51,690190	+29,530531	+9,446003	66	243 9107,5	-43,019450	+32,540879	+19,631809	66
243 9073,0	+47,531564	+34,417284	+12,179916	66	243 9108,0	-47,556600	+27,307176	+17,530791	66
243 9073,5	+42,738931	+38,846739	+14,752667	66	243 9108,5	-51,367137	+21,661707	+15,164377	66
243 9074,0	+37,367719	+42,750490	+17,126226	66	243 9109,0	-54,401212	+15,692724	+12,570504	66
243 9074,5	+31,483832	+46,065875	+19,264348	66	243 9109,5	-56,622624	+9,491757	+9,789934	66
243 9075,0	+25,163030	+48,737448	+21,133348	66	243 9110,0	-58,008869	+3,151772	+6,865397	66
243 9075,5	+18,490009	+50,718481	+22,702899	66	243 9110,5	-58,550813	-3,234531	+3,840732	66
243 9076,0	+11,557092	+51,972217	+23,946756	66	243 9111,0	-58,252146	-9,576214	+0,760109	66
243 9076,5	+4,462691	+52,472939	+24,843422	66	243 9111,5	-57,128749	-15,785477	-2,332683	66
243 9077,0	-2,690475	+52,206862	+25,376739	66	243 9112,0	-55,207794	-21,778803	-5,394877	66
243 9077,5	-9,797352	+51,172632	+25,536301	66	243 9112,5	-52,526779	-27,477956	-8,385300	66
243 9078,0	-16,752587	+49,381458	+25,317732	66	243 9113,0	-49,132597	-32,810844	-11,264875	66
243 9078,5	-23,452593	+46,857103	+24,722839	66	243 9113,5	-45,080418	-37,712212	-13,997053	66
243 9079,0	-29,797527	+43,635338	+23,759564	66	243 9114,0	-40,432603	-42,124189	-16,548188	66
243 9079,5	-35,693204	+39,763336	+22,441859	66	243 9114,5	-35,257609	-45,996743	-18,887847	66
243 9080,0	-41,052776	+35,298649	+20,789341	66	243 9115,0	-29,628837	-49,287965	-20,989064	66
243 9080,5	-45,798267	+30,308117	+18,826930	66	243 9115,5	-23,623557	-51,964276	-22,828536	66
243 9081,0	-49,861818	+24,866524	+16,584296	66	243 9116,0	-17,321758	-54,000493	-24,386751	66
243 9081,5	-53,186794	+19,055210	+14,095320	66	243 9116,5	-10,805099	-55,379777	-25,648085	66
243 9082,0	-55,728595	+12,960579	+11,397420	66	243 9117,0	-4,155879	-56,093517	-26,600810	66
243 9082,5	-57,455170	+6,672499	+8,530867	66	243 9117,5	+2,543958	-56,141014	-27,237065	66
243 9083,0	-58,347411	+0,282755	+5,538044	66	243 9118,0	+9,213703	-55,529229	-27,552787	66
243 9083,5	-58,399170	-6,116547	+2,462694	66	243 9118,5	+15,774702	-54,272323	-27,547586	66
243 9084,0	-57,617195	-12,434529	-0,650822	66	243 9119,0	+22,151070	-52,391205	-27,224589	66
243 9084,5	-56,020654	-18,583045	-3,758312	66	243 9119,5	+28,270289	-49,913007	-26,590232	66
243 9085,0	-53,640508	-24,478069	-6,816466	66	243 9120,0	+34,063786	-46,870678	-25,654129	66
243 9085,5	-50,518704	-30,040982	-9,783562	66	243 9120,5	+39,467274	-43,302310	-24,428768	66
243 9086,0	-46,707144	-35,199729	-12,620104	66	243 9121,0	+44,421157	-39,250786	-22,929387	66

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z	J.D.	x	y	z		
243 9121.5	+48,870811	-34,763247	-21,173746	66	243 9156.5	+34,735122	+45,169091	+18,844462	66
243 9122.0	+52,766757	-29,890668	-19,181913	66	243 9157.0	+28,616000	+47,908884	+20,701856	66
243 9122.5	+56,064855	-24,687454	-16,976128	66	243 9157.5	+22,098523	+49,989482	+22,274371	66
243 9123.0	+58,726530	-19,211142	-14,580636	66	243 9158.0	+15,264142	+51,365457	+23,532827	66
243 9123.5	+60,718872	-13,522042	-12,021556	66	243 9158.5	+ 8,203400	+51,999665	+24,451287	66
243 9124.0	+62,014838	- 7,682992	- 9,326759	66	243 9159.0	+ 1,015150	+51,864922	+25,007926	66
243 9124.5	+62,593518	- 1,759097	- 6,525783	66	243 9159.5	- 6,194677	+50,945594	+25,185914	66
243 9125.0	+62,440369	+ 4,182504	- 3,649717	66	243 9160.0	-13,314782	+49,239194	+24,974348	66
243 9125.5	+61,547615	+10,072925	- 0,731119	66	243 9160.5	-20,230770	+46,757708	+24,369082	66
243 9126.0	+59,914570	+15,841812	+ 2,196102	66	243 9161.0	-26,827880	+43,528387	+23,373359	66
243 9126.5	+57,548227	+21,417735	+ 5,096815	66	243 9161.5	-32,994135	+39,594178	+21,998287	66
243 9127.0	+54,463758	+26,728668	+ 7,934869	66	243 9162.0	-38,623642	+35,013303	+20,262922	66
243 9127.5	+50,685104	+31,702582	+10,673308	66	243 9162.5	-43,619891	+29,858197	+18,194045	66
243 9128.0	+46,245544	+36,268195	+13,274696	66	243 9163.0	-47,898821	+24,213716	+15,825561	66
243 9128.5	+41,188386	+40,356017	+15,701559	66	243 9163.5	-51,391304	+18,174719	+13,197525	66
243 9129.0	+35,567301	+43,899431	+17,916873	66	243 9164.0	-54,044967	+11,843193	+10,354929	66
243 9129.5	+29,446721	+46,836156	+19,884733	66	243 9164.5	-55,825187	+ 5,325205	+ 7,346279	66
243 9130.0	+22,901899	+49,109862	+21,571140	66	243 9165.0	-56,715278	- 1,272201	+ 4,222130	66
243 9130.5	+16,018550	+50,671886	+22,944855	66	243 9165.5	-56,715886	- 7,843838	+ 1,033638	66
243 9131.0	+ 8,892150	+51,483115	+23,978369	66	243 9166.0	-55,843756	-14,288870	- 2,168754	66
243 9131.5	+ 1,626675	+51,515841	+24,648914	66	243 9166.5	-54,130118	-20,512820	- 5,336421	66
243 9132.0	- 5,667209	+50,755371	+24,939404	66	243 9167.0	-51,618732	-26,429077	- 8,423471	66
243 9132.5	-12,874458	+49,201434	+24,839328	66	243 9167.5	-48,363842	-31,959904	-11,387397	66
243 9133.0	-19,878453	+46,869080	+24,345431	66	243 9168.0	-44,428220	-37,037046	-14,189561	66
243 9133.5	-26,564073	+43,789015	+23,462145	66	243 9168.5	-39,881257	-41,601921	-16,795439	66
243 9134.0	-32,820909	+40,007199	+22,201710	66	243 9169.0	-34,797336	-45,605647	-19,174793	66
243 9134.5	-38,546396	+35,583895	+20,583976	66	243 9169.5	-29,254266	-49,008713	-21,301635	66
243 9135.0	-43,648655	+30,592018	+18,635865	66	243 9170.0	-23,332104	-51,780696	-23,154200	66
243 9135.5	-48,048741	+25,114949	+16,390522	66	243 9170.5	-17,112071	-53,899832	-24,714839	66
243 9136.0	-51,682419	+19,244105	+13,886304	66	243 9171.0	-10,675620	-55,352473	-25,969824	66
243 9136.5	-54,501127	+13,076287	+11,165586	66	243 9171.5	- 4,103764	-56,132781	-26,909279	66
243 9137.0	-56,472354	+ 6,711065	+ 8,273521	66	243 9172.0	+ 2,523622	-56,242124	-27,526926	66
243 9137.5	-57,579425	+ 0,248342	+ 5,256863	66	243 9172.5	+ 9,128297	-55,688781	-27,820011	66
243 9138.0	-57,820726	- 6,213824	+ 2,162832	66	243 9173.0	+15,634165	-54,487602	-27,789159	66
243 9138.5	-57,208651	-12,581045	- 0,961859	66	243 9173.5	+21,967714	-52,659501	-27,438186	66
243 9139.0	-55,768341	-18,764097	- 4,071837	66	243 9174.0	+28,058436	-50,231261	-26,774034	66
243 9139.5	-53,536145	-24,680031	- 7,123747	66	243 9174.5	+33,839270	-47,235199	-25,806638	66
243 9140.0	-50,558269	-30,253024	-10,076793	66	243 9175.0	+39,246934	-43,708721	-24,548758	66
243 9140.5	-46,889237	-35,414921	-12,893124	66	243 9175.5	+44,222381	-39,694127	-23,015916	66
243 9141.0	-42,590598	-40,105581	-15,538139	66	243 9176.0	+48,711158	-35,238199	-21,226228	66
243 9141.5	-37,729644	-44,273092	-17,980688	66	243 9176.5	+52,663750	-30,391835	-19,200256	66
243 9142.0	-32,378230	-47,873808	-20,193210	66	243 9177.0	+56,036000	-25,209707	-16,960870	66
243 9142.5	-26,611674	-50,872264	-22,151795	66	243 9177.5	+58,789435	-19,749842	-14,533093	66
243 9143.0	-20,507854	-53,241193	-23,836267	66	243 9178.0	+60,891570	-14,073176	-11,943873	66
243 9143.5	-14,146218	-54,961208	-25,230117	66	243 9178.5	+62,316274	- 8,243138	- 9,221947	66
243 9144.0	- 7,607034	-56,020793	-26,320580	66	243 9179.0	+63,043950	- 2,325132	- 6,397589	66
243 9144.5	- 0,970560	-56,415949	-27,098544	66	243 9179.5	+63,061793	+ 3,613896	- 3,502407	66
243 9145.0	+ 5,683684	-56,149966	-27,558473	66	243 9180.0	+62,364114	+ 9,505997	- 0,569134	66
243 9145.5	+12,277588	-55,233195	-27,698392	66	243 9180.5	+60,952328	+15,282690	+ 2,368624	66
243 9146.0	+18,735132	-53,682682	-27,519761	66	243 9181.0	+58,835360	+20,875537	+ 5,276633	66
243 9146.5	+24,982975	-51,521837	-27,027355	66	243 9181.5	+56,029547	+26,216611	+ 8,120260	66
243 9147.0	+30,951019	-48,780027	-26,229141	66	243 9182.0	+52,558973	+31,239110	+10,864755	66
243 9147.5	+36,572948	-45,492203	-25,136128	66	243 9182.5	+48,455500	+35,877932	+13,475530	66
243 9148.0	+41,786653	-41,698459	-23,762207	66	243 9183.0	+43,758874	+40,070286	+15,918446	66
243 9148.5	+46,534719	-37,443629	-22,123986	66	243 9183.5	+38,516874	+43,756421	+18,160155	66
243 9149.0	+50,764701	-32,776775	-20,240577	66	243 9184.0	+32,785310	+46,880325	+20,168465	66
243 9149.5	+54,429520	-27,750808	-18,133437	66	243 9184.5	+26,628087	+49,390645	+21,912770	66
243 9150.0	+57,487741	-22,422033	-15,826183	66	243 9185.0	+20,117100	+51,241613	+23,364519	66
243 9150.5	+59,903729	-16,849672	-13,344364	66	243 9185.5	+13,332021	+52,394093	+24,497746	66
243 9151.0	+61,647953	-11,095501	-10,715321	66	243 9186.0	+ 6,359901	+52,816730	+25,289676	66
243 9151.5	+62,697112	- 5,223421	- 7,967983	66	243 9186.5	- 0,705439	+52,487175	+25,721367	66
243 9152.0	+63,034361	+ 0,700901	- 5,132707	66	243 9187.0	- 7,764335	+51,393371	+25,778432	66
243 9152.5	+62,649485	+ 6,610433	- 2,241115	66	243 9187.5	-14,712542	+49,534747	+25,451719	66
243 9153.0	+61,539134	+12,437119	+ 0,674065	66	243 9188.0	-21,442907	+46,923385	+24,738043	66
243 9153.5	+59,706996	+18,112265	+ 3,579173	66	243 9188.5	-27,847439	+43,584942	+23,640802	66
243 9154.0	+57,164168	+23,566952	+ 6,439781	66	243 9189.0	-33,819748	+39,559184	+22,170451	66
243 9154.5	+53,929434	+28,732496	+ 9,220895	66	243 9189.5	-39,257868	+34,900192	+20,344845	66
243 9155.0	+50,029542	+33,540926	+11,887170	66	243 9190.0	-44,067159	+29,675818	+18,189208	66
243 9155.5	+45,499689	+37,925655	+14,403190	66	243 9190.5	-48,163367	+23,966692	+15,735920	66
243 9156.0	+40,383844	+41,822199	+16,733786	66	243 9191.0	-51,475304	+17,864419	+13,023844	66

J.D.	x	y	z	J.D.	x	y	z		
243 9191,5	-53,947293	+11,469307	+10,097435	66	243 9226,5	+ 1,104355	-55,002655	-27,358338	66
243 9192,0	-55,540842	+ 4,887545	+ 7,005487	66	243 9227,0	+ 7,826913	-54,698748	-27,771859	66
243 9192,5	-56,235624	-1,771849	+ 3,799727	66	243 9227,5	+14,450157	-53,721325	-27,843357	66
243 9193,0	-56,029657	- 8,400150	+ 0,533293	66	243 9228,0	+20,896706	-52,093551	-27,577750	66
243 9193,5	-54,938556	-14,891898	- 2,740780	66	243 9228,5	+27,093578	-49,844504	-26,983246	66
243 9194,0	-52,994242	-21,147485	- 5,970942	66	243 9229,0	+32,972372	-47,008509	-26,071041	66
243 9194,5	-50,242998	-27,075277	- 9,108335	66	243 9229,5	+38,469461	-43,624710	-24,855126	66
243 9195,0	-46,743332	-32,593205	-12,107746	66	243 9230,0	+43,526035	-39,736525	-23,352017	66
243 9195,5	-42,563515	-37,629725	-14,928288	66	243 9230,5	+48,088260	-35,391366	-21,580632	66
243 9196,0	-37,779292	-42,124324	-17,533846	66	243 9231,0	+52,107373	-30,640315	-19,562139	66
243 9196,5	-32,471724	-46,027574	-19,893288	66	243 9231,5	+55,539889	-25,537852	-17,319852	66
243 9197,0	-26,725264	-49,300934	-21,980525	66	243 9232,0	+58,347729	-20,141579	-14,879082	66
243 9197,5	-20,626017	-51,916089	-23,774345	66	243 9232,5	+60,498566	-14,512015	-12,267092	66
243 9198,0	-14,260469	-53,854482	-25,258283	66	243 9233,0	+61,966005	- 8,712264	-9,512926	66
243 9198,5	- 7,714329	-55,106486	-26,420326	66	243 9233,5	+62,730049	- 2,807749	- 6,647335	66
243 9199,0	- 1,071683	-55,670710	-27,252638	66	243 9234,0	+62,777377	+ 3,134183	- 3,702589	66
243 9199,5	+ 5,585662	-55,553351	-27,751307	66	243 9234,5	+62,101793	+ 9,044688	- 0,712313	66
243 9200,0	+12,178672	-54,767472	-27,916020	66	243 9235,0	+60,704575	+14,853952	+ 2,288743	66
243 9200,5	+18,631486	-53,332470	-27,749855	66	243 9235,5	+58,594887	+20,491789	+ 5,264981	66
243 9201,0	+24,871707	-51,273613	-27,259069	66	243 9236,0	+55,789999	+25,888326	+ 8,180258	66
243 9201,5	+30,830673	-48,621544	-26,452877	66	243 9236,5	+52,315685	+30,974817	+10,998266	66
243 9202,0	+36,443682	-45,411942	-25,343307	66	243 9237,0	+48,206219	+35,684435	+13,682926	66
243 9202,5	+41,650238	-41,685180	-23,945069	66	243 9237,5	+43,504525	+39,953257	+16,198861	66
243 9203,0	+46,394313	-37,486028	-22,275413	66	243 9238,0	+38,261996	+43,721156	+18,511855	66
243 9203,5	+50,624544	-32,863334	-20,354003	66	243 9238,5	+32,538319	+46,932846	+20,589390	66
243 9204,0	+54,294653	-27,869814	-18,202845	66	243 9239,0	+26,400972	+49,538793	+22,401134	66
243 9204,5	+57,363615	-22,561663	-15,846118	66	243 9239,5	+19,924741	+51,496258	+23,919516	66
243 9205,0	+59,796108	-16,998300	-13,310081	66	243 9240,0	+13,190908	+52,770095	+25,120176	66
243 9205,5	+61,562809	-11,241990	-10,622911	66	243 9240,5	+ 6,286417	+53,333702	+25,982518	66
243 9206,0	+62,640782	- 5,357445	- 7,814534	66	243 9241,0	- 0,697198	+53,169671	+26,490128	66
243 9206,5	+63,013827	+ 0,588626	-4,916457	66	243 9241,5	- 7,664968	+52,270513	+26,631220	66
243 9207,0	+62,672790	+ 6,528021	- 1,961506	66	243 9242,0	-14,519793	+50,639121	+26,398988	66
243 9207,5	+61,615886	+12,391603	+ 1,016384	66	243 9242,5	-21,163874	+48,289198	+25,791937	66
243 9208,0	+59,848974	+18,109903	+ 3,982458	66	243 9243,0	-27,500208	+45,245434	+24,814098	66
243 9208,5	+57,385716	+23,613769	+ 6,901453	66	243 9243,5	-33,434213	+41,543595	+23,475212	66
243 9209,0	+54,247778	+28,835059	+ 9,737923	66	243 9244,0	-38,875389	+37,230360	+21,790789	66
243 9209,5	+50,464880	+33,707371	+12,456578	66	243 9244,5	-43,739085	+32,362993	+19,782096	66
243 9210,0	+46,074780	+38,166760	+15,022659	66	243 9245,0	-47,948190	+27,008679	+17,475982	66
243 9210,5	+41,123251	+42,152541	+17,402338	66	243 9245,5	-51,434902	+21,243728	+14,904610	66
243 9211,0	+35,663936	+45,608088	+19,563107	66	243 9246,0	-54,142300	+15,152370	+12,105014	66
243 9211,5	+29,758065	+48,481591	+21,474196	66	243 9246,5	-56,025922	+ 8,825391	+ 9,118535	66
243 9212,0	+23,474195	+50,726915	+23,107010	66	243 9247,0	-57,054856	+ 2,358391	+ 5,990068	66
243 9212,5	+16,887763	+52,304412	+24,435579	66	243 9247,5	-57,212873	- 4,150076	+ 2,767219	66
243 9213,0	+10,080583	+53,181788	+25,437020	66	243 9248,0	-56,498803	-10,600633	- 0,500711	66
243 9213,5	+ 3,140193	+53,335001	+26,092043	66	243 9248,5	-54,926761	-16,895220	- 3,763783	66
243 9214,0	- 3,840992	+52,749035	+26,385414	66	243 9249,0	-52,525747	-22,939283	- 6,972535	66
243 9214,5	-10,766640	+51,418783	+26,306454	66	243 9249,5	-49,338853	-28,643825	-10,079068	66
243 9215,0	-17,537719	+49,349830	+25,849551	66	243 9250,0	-45,421925	-33,927236	-13,038073	66
243 9215,5	-24,053896	+46,559084	+25,014568	66	243 9250,5	-40,842002	-38,716840	-15,807731	66
243 9216,0	-30,215245	+43,075411	+23,807328	66	243 9251,0	-35,675403	-42,950088	-18,350468	66
243 9216,5	-35,924075	+38,939818	+22,239844	66	243 9251,5	-30,005631	-46,575308	-20,633506	66
243 9217,0	-41,087116	+34,205615	+20,330582	66	243 9252,0	-23,921290	-49,552058	-22,629219	66
243 9217,5	-45,617778	+28,938063	+18,104498	66	243 9252,5	-17,514093	-51,851194	-24,315327	66
243 9218,0	-49,438441	+23,213585	+15,592814	66	243 9253,0	-10,876940	-53,454506	-25,674894	66
243 9218,5	-52,482852	+17,118637	+12,832691	66	243 9253,5	- 4,102284	-54,354147	-26,696166	66
243 9219,0	-54,698114	+10,747971	+ 9,866517	66	243 9254,0	+ 2,719255	-54,551977	-27,372375	66
243 9219,5	-56,046570	+ 4,202570	+ 6,741054	66	243 9254,5	+ 9,500059	-54,058586	-27,701350	66
243 9220,0	-56,507002	- 2,412846	+ 3,506303	66	243 9255,0	+16,156363	-52,892531	-27,685206	66
243 9220,5	-56,075288	- 8,992493	+ 0,214234	66	243 9255,5	+22,608903	-51,079373	-27,329921	66
243 9221,0	-54,764435	-15,432283	- 3,082567	66	243 9256,0	+28,783383	-48,650886	-26,644998	66
243 9221,5	-52,603888	-21,632456	- 6,332269	66	243 9256,5	+34,610736	-45,644294	-25,643082	66
243 9222,0	-49,638188	-27,499956	- 9,485085	66	243 9257,0	+40,027334	-42,101599	-24,339659	66
243 9222,5	-45,925206	-32,950405	-12,494379	66	243 9257,5	+44,975016	-38,068992	-22,752770	66
243 9223,0	-41,533961	-37,909568	-15,317605	66	243 9258,0	+49,401249	-33,596433	-20,902801	66
243 9223,5	-36,542291	-42,314328	-17,916955	66	243 9258,5	+53,259029	-28,737158	-18,812243	66
243 9224,0	-31,034502	-46,113155	-20,259809	66	243 9259,0	+56,507056	-23,547428	-16,505583	66
243 9224,5	-25,099153	-49,266148	-22,318937	66	243 9259,5	+59,109742	-18,086202	-14,009122	66
243 9225,0	-18,826980	-51,744667	-24,072490	66	243 9260,0	+61,037339	-12,414892	-11,350894	66
243 9225,5	-12,309201	-53,530745	-25,503862	66	243 9260,5	+62,266217	- 6,597150	- 8,560564	66
243 9226,0	- 5,636055	-54,616392	-26,601458	66	243 9261,0	+62,778955	-0,698582	- 5,669292	66

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z	J.D.	x	y	z		
243 9261,5	+62,564830	+ 5,213509	- 2,709661	66	243 9296,5	-13,519013	+50,020637	+25,976788	66
243 9262,0	+61,620006	+11,070488	+ 0,284504	66	243 9297,0	-20,354027	+47,737451	+25,408582	66
243 9262,5	+59,948084	+16,802793	+ 3,278277	66	243 9297,5	-26,881462	+44,744267	+24,461435	66
243 9263,0	+57,560384	+22,340447	+ 6,235874	66	243 9298,0	-33,000095	+41,080894	+23,146784	66
243 9263,5	+54,476467	+27,613698	+ 9,120922	66	243 9298,5	-38,614681	+36,799312	+21,482618	66
243 9264,0	+50,724466	+32,553757	+11,896800	66	243 9299,0	-43,638086	+31,962589	+19,493131	66
243 9264,5	+46,341338	+37,093664	+14,527046	66	243 9299,5	-47,993242	+26,643618	+17,208251	66
243 9265,0	+41,373104	+41,169294	+16,975847	66	243 9300,0	-51,614617	+20,923401	+14,662903	66
243 9265,5	+35,874827	+44,720410	+19,208553	66	243 9300,5	-54,449541	+14,889346	+11,896265	66
243 9266,0	+29,910479	+47,691890	+21,192309	66	243 9301,0	-56,458903	+ 8,633321	+ 8,950876	66
243 9266,5	+23,552471	+50,034814	+22,896632	66	243 9301,5	-57,617638	+2,249775	+ 5,871721	66
243 9267,0	+16,881076	+51,707778	+24,294108	66	243 9302,0	-57,914798	- 4,166129	+ 2,705303	66
243 9267,5	+ 9,983459	+52,677933	+25,361005	66	243 9302,5	-57,353264	-10,520265	+ 0,501237	66
243 9268,0	+ 2,952548	+52,922055	+26,077887	66	243 9303,0	-55,949238	-16,721185	- 3,700989	66
243 9268,5	- 4,114381	+52,427376	+26,430165	66	243 9303,5	-53,731532	-22,681561	- 6,848056	66
243 9269,0	-11,117272	+51,192255	+26,408545	66	243 9304,0	-50,740606	-28,319510	- 9,898289	66
243 9269,5	-17,955048	+49,226540	+26,009373	66	243 9304,5	-47,027455	-33,559672	-12,809924	66
243 9270,0	-24,527421	+46,551816	+25,234902	66	243 9305,0	-42,652460	-38,334166	-15,544142	66
243 9270,5	-30,736762	+43,201177	+24,093343	66	243 9305,5	-37,684126	-42,583392	-18,065591	66
243 9271,0	-36,489946	+39,218913	+22,598860	66	243 9306,0	-32,197655	-46,256527	-20,342733	66
243 9271,5	-41,700117	+34,659845	+20,771389	66	243 9306,5	-26,273677	-49,312031	-22,348220	66
243 9272,0	-46,288330	+29,588435	+18,636345	66	243 9307,0	-19,996780	-51,717817	-24,059083	66
243 9272,5	-50,185064	+24,077758	+16,224221	66	243 9307,5	-13,454181	-53,451354	-25,456914	66
243 9273,0	-53,331525	+18,208203	+13,570066	66	243 9308,0	- 6,734373	-54,499577	-26,527910	66
243 9273,5	-55,680763	+12,066085	+10,712879	66	243 9308,5	+ 0,074141	-54,858619	-27,262870	66
243 9274,0	-57,198492	+ 5,742087	+ 7,694904	66	243 9309,0	* + 6,884038	-54,533486	-27,657108	66
243 9274,5	-57,863774	- 0,670338	+ 4,560898	66	243 9309,5	+13,610242	-53,537526	-27,710296	66
243 9275,0	-57,669338	- 7,076672	+ 1,357298	66	243 9310,0	+20,170890	-51,891877	-27,426253	66
243 9275,5	-56,621639	-13,383045	+ 1,868613	66	243 9310,5	+26,488140	-49,624789	-26,812677	66
243 9276,0	-54,740636	-19,497927	- 5,069580	66	243 9311,0	+32,488855	-46,770982	-25,880893	66
243 9276,5	-52,059355	-25,333784	- 8,199240	66	243 9311,5	+38,105158	-43,370888	-24,645508	66
243 9277,0	-48,622995	-30,808621	-11,212943	66	Epoch 1967.0				
243 9277,5	-44,487903	-35,847345	-14,068551	66	243 9303,0	-55,945140	-16,733690	- 3,706424	67
243 9278,0	-39,720323	-40,383036	-16,727146	66	243 9303,5	-53,725796	-22,693570	- 6,853276	67
243 9278,5	-34,394860	-44,357871	-19,153647	66	243 9304,0	-50,733313	-28,330850	- 9,903218	67
243 9279,0	-28,592840	-47,723834	-21,317278	66	243 9304,5	-47,018708	-33,570182	-12,814493	67
243 9279,5	-22,400639	-50,443203	-23,191969	66	243 9305,0	-42,642381	-38,343699	-15,548286	67
243 9280,0	-15,907952	-52,488694	-24,756569	66	243 9305,5	-37,672852	-42,591814	-18,069251	67
243 9280,5	- 9,206114	-53,843380	-25,994944	66	243 9306,0	-32,185339	-46,263722	-20,345860	67
243 9281,0	- 2,386553	-54,500387	-26,895969	66	243 9306,5	-26,260483	-49,317902	-22,350772	67
243 9281,5	+4,460616	-54,462311	-27,453338	66	243 9307,0	-19,982882	-51,722285	-24,061025	67
243 9282,0	+11,247807	-53,740665	-27,665401	66	243 9307,5	-13,439761	-53,454360	-25,458220	67
243 9282,5	+17,890980	-52,355069	-27,534850	66	243 9308,0	- 6,719615	-54,501081	-26,528563	67
243 9283,0	+24,310453	-50,332412	-27,068368	66	243 9308,5	+ 0,089051	-54,858601	-27,262862	67
243 9283,5	+30,431534	-47,706123	-26,276317	66	243 9309,0	+ 6,898913	-54,531946	-27,656438	67
243 9284,0	+36,184949	-44,515285	-25,172340	66	243 9309,5	+13,624901	-53,534482	-27,708973	67
243 9284,5	+41,507165	-40,803950	-23,773030	66	243 9310,0	+20,185153	-51,887368	-27,424292	67
243 9285,0	+46,340537	-36,620423	-22,097613	66	243 9310,5	+26,501836	-49,618867	-26,810103	67
243 9285,5	+50,633437	-32,016712	-20,167660	66	243 9311,0	+32,501823	-46,763719	-25,877736	67
243 9286,0	+54,340322	-27,047993	-18,006838	66	243 9311,5	+38,117246	-43,362370	-24,641805	67
243 9286,5	+57,421675	-21,772149	-15,640669	66	243 9312,0	+43,285880	-39,460278	-23,119889	67
243 9287,0	+59,844105	-16,249439	-13,096374	66	243 9312,5	+47,951496	-35,107280	-21,332257	67
243 9287,5	+61,580296	-10,542133	-10,402693	66	243 9313,0	+52,064011	-30,356913	-19,301527	67
243 9288,0	+62,609206	- 4,714295	- 7,589782	66	243 9313,5	+55,579638	-25,265845	-17,052403	67
243 9288,5	+62,916069	+ 1,168510	- 4,689074	66	243 9314,0	+58,460922	-19,893344	-14,611412	67
243 9289,0	+62,492705	+ 7,039457	- 1,733184	66	243 9314,5	+60,676806	-14,300834	-12,006681	67
243 9289,5	+61,337693	+12,830758	+ 1,244228	66	243 9315,0	+62,202659	- 8,551466	- 9,267737	67
243 9290,0	+59,456707	+18,473969	+ 4,208586	66	243 9315,5	+63,020241	- 2,709758	- 6,425302	67
243 9290,5	+56,862892	+23,900404	+ 7,124570	66	243 9316,0	+63,117786	+ 3,158719	- 3,511165	67
243 9291,0	+53,577301	+29,041651	+ 9,956336	66	243 9316,5	+62,490143	+ 8,987650	- 0,558025	67
243 9291,5	+49,629235	+33,830155	+12,667781	66	243 9317,0	+61,138769	+14,710254	+ 2,400648	67
243 9292,0	+45,056745	+38,200056	+15,222922	66	243 9317,5	+59,072057	+20,259612	+ 5,330756	67
243 9292,5	+39,906787	+42,087993	+17,586272	66	243 9318,0	+56,305502	+25,569006	+ 8,197719	67
243 9293,0	+34,235591	+45,434266	+19,723408	66	243 9318,5	+52,861996	+30,572314	+10,966660	67
243 9293,5	+28,108566	+48,183973	+21,601537	66	243 9319,0	+48,772164	+35,204507	+13,602624	67
243 9294,0	+21,600135	+50,288328	+23,190157	66	243 9319,5	+44,074772	+39,402298	+16,070868	67
243 9294,5	+14,793223	+51,706018	+24,461797	66	243 9320,0	+38,816967	+43,104817	+18,337196	67
243 9295,0	+ 7,778443	+52,404618	+25,392767	66	243 9320,5	+33,054601	+46,254548	+20,368372	67
243 9295,5	+ 0,652908	+52,361866	+25,963915	66	243 9321,0	+26,852405	+48,798366	+22,132662	67
243 9296,0	- 6,481307	+51,566783	+26,161292	66					

J.D.	x	y	z	J.D.	x	y	z		
243 9321,5	+20,283985	+50,688770	+23,600414	67	243 9356,5	-56,436292	-2,566663	+2,958996	67
243 9322,0	+13,431547	+51,885185	+24,744765	67	243 9357,0	-56,095612	-9,120890	-0,358460	67
243 9322,5	+6,385387	+52,355418	+25,542387	67	243 9357,5	-54,872903	-15,526179	-3,668378	67
243 9323,0	-0,757048	+52,077086	+25,974284	67	243 9358,0	-52,800712	-21,685523	-6,919477	67
243 9323,5	-7,892479	+51,039067	+26,026625	67	243 9358,5	-49,925397	-27,509600	-10,063268	67
243 9324,0	-14,913566	+49,242711	+25,691488	67	243 9359,0	-46,305049	-32,918131	-13,054912	67
243 9324,5	-21,711078	+46,702736	+24,967474	67	243 9359,5	-42,007349	-37,840791	-15,853832	67
243 9325,0	-28,176404	+43,447858	+23,860238	67	243 9360,0	-37,107593	-42,217755	-18,424143	67
243 9325,5	-34,204270	+39,520772	+22,382675	67	243 9360,5	-31,686592	-45,999738	-20,734832	67
243 9326,0	-39,695601	+34,977726	+20,554957	67	243 9361,0	-25,829041	-49,147966	-22,759886	67
243 9326,5	-44,560170	+29,887402	+18,404179	67	243 9361,5	-19,621902	-51,633834	-24,478222	67
243 9327,0	-48,719097	+24,329380	+15,963782	67	243 9362,0	-13,153059	-53,438425	-25,873566	67
243 9327,5	-52,106814	+18,392110	+13,272706	67	243 9362,5	-6,510195	-54,552014	-26,934283	67
243 9328,0	-54,672598	+12,170623	+10,374378	67	243 9363,0	+0,220184	-54,973501	-27,653171	67
243 9328,5	-56,381446	+5,764077	+7,315538	67	243 9363,5	+6,953554	-54,709830	-28,027230	67
243 9329,0	-57,214339	-0,726729	+4,145024	67	243 9364,0	+13,608063	-53,775419	-28,057443	67
243 9329,5	-57,168064	-7,201669	+0,912613	67	243 9364,5	+20,105117	-52,191624	-27,748534	67
243 9330,0	-56,254419	-13,563423	-2,332131	67	243 9365,0	+26,369897	-49,986217	-27,108756	67
243 9330,5	-54,499157	-19,719283	-5,540821	67	243 9365,5	+32,331828	-47,192891	-26,149692	67
243 9331,0	-51,940693	-25,582680	-8,667128	67	243 9366,0	+37,924965	-43,850726	-24,885985	67
243 9331,5	-48,628587	-31,074343	-11,667480	67	243 9366,5	+43,088399	-40,003741	-23,335168	67
243 9332,0	-44,621955	-36,123165	-14,501626	67	243 9367,0	+47,766606	-35,700397	-21,517443	67
243 9332,5	-39,987967	-40,666822	-17,133052	67	243 9367,5	+51,909694	-30,993070	-19,455414	67
243 9333,0	-34,800310	-44,652153	-19,529318	67	243 9368,0	+55,473728	-25,937613	-17,173908	67
243 9333,5	-29,137758	-48,035334	-21,662237	67	243 9368,5	+58,421002	-20,592841	-14,699731	67
243 9334,0	-23,082786	-50,781889	-23,508008	67	243 9369,0	+60,720158	-15,020019	-12,061415	67
243 9334,5	-16,720344	-52,866634	-25,047274	67	243 9369,5	+62,346411	-9,282370	-9,288992	67
243 9335,0	-10,136664	-54,273411	-26,265097	67	243 9370,0	+63,281697	-3,444586	-6,413761	67
243 9335,5	-3,418226	-54,994898	-27,150951	67	243 9370,5	+63,514716	+2,427677	-3,468025	67
243 9336,0	+3,349273	-55,032216	-27,698588	67	243 9371,0	+63,041067	+8,268292	-0,484874	67
243 9336,5	+10,081795	-54,394540	-27,905937	67	243 9371,5	+61,863197	+14,011119	+2,502077	67
243 9337,0	+16,697799	-53,098629	-27,774924	67	243 9372,0	+59,990482	+19,590468	+5,458893	67
243 9337,5	+23,119002	-51,168380	-27,311313	67	243 9372,5	+57,439216	+24,941571	+8,351578	67
243 9338,0	+29,271032	-48,634248	-26,524470	67	243 9373,0	+54,232657	+30,001028	+11,146292	67
243 9338,5	+35,084033	-45,532736	-25,427146	67	243 9373,5	+50,400990	+34,707277	+13,809599	67
243 9339,0	+40,493189	-41,905794	-24,035235	67	243 9374,0	+45,981320	+39,001059	+16,308686	67
243 9339,5	+45,439128	-37,800213	-22,367484	67	243 9374,5	+41,017765	+42,825994	+18,611671	67
243 9340,0	+49,868300	-33,267051	-20,445253	67	243 9375,0	+35,561340	+46,129030	+20,687831	67
243 9340,5	+53,733210	-28,361008	-18,292212	67	243 9375,5	+29,670012	+48,861111	+22,507931	67
243 9341,0	+56,992705	-23,139925	-15,934105	67	243 9376,0	+23,408644	+50,977866	+24,044579	67
243 9341,5	+59,612078	-17,664185	-13,398474	67	243 9376,5	+16,848888	+52,440298	+25,272599	67
243 9342,0	+61,563113	-11,996187	-10,714389	67	243 9377,0	+10,069010	+53,215716	+26,169505	67
243 9342,5	+62,824256	-6,199905	-7,912240	67	243 9377,5	+3,153563	+53,278643	+26,715996	67
243 9343,0	+63,380561	-0,340401	-5,023494	67	243 9378,0	-3,807126	+52,611861	+26,896512	67
243 9343,5	+63,223753	+5,516556	-2,080504	67	243 9378,5	-10,717680	+51,207494	+26,699856	67
243 9344,0	+62,352230	+11,304900	+0,883701	67	243 9379,0	-17,478738	+49,068127	+26,119842	67
243 9344,5	+60,771130	+16,958619	+3,835579	67	243 9379,5	-23,988287	+46,207808	+25,155889	67
243 9345,0	+58,492441	+22,412128	+6,741273	67	243 9380,0	-30,143473	+42,653063	+23,813691	67
243 9345,5	+55,535033	+27,600643	+9,566780	67	243 9380,5	-35,842702	+38,443501	+22,105667	67
243 9346,0	+51,924819	+32,460556	+12,278133	67	243 9381,0	-40,988154	+33,632148	+20,051331	67
243 9346,5	+47,694944	+36,929910	+14,841640	67	243 9381,5	-45,488544	+28,285300	+17,677415	67
243 9347,0	+42,885943	+40,948869	+17,224082	67	243 9382,0	-49,262002	+22,481752	+15,017701	67
243 9347,5	+37,545998	+44,460366	+19,393052	67	243 9382,5	-52,238847	+16,311436	+12,112539	67
243 9348,0	+31,731060	+47,410747	+21,317244	67	243 9383,0	-54,364202	+9,873436	+9,008024	67
243 9348,5	+25,505035	+49,750641	+22,966890	67	243 9383,5	-55,599975	+3,273427	+5,754871	67
243 9349,0	+18,939844	+51,435988	+24,314276	67	243 9384,0	-55,926225	-3,379268	+2,407004	67
243 9349,5	+12,115246	+52,429025	+25,334252	67	243 9384,5	-55,341706	-9,974831	-0,979983	67
243 9350,0	+5,118583	+52,699685	+26,004948	67	243 9385,0	-53,863522	-16,406043	+4,350443	67
243 9350,5	-1,955875	+52,226778	+26,308430	67	243 9385,5	-51,526102	-22,571175	-7,650199	67
243 9351,0	-9,007872	+50,999492	+26,231522	67	243 9386,0	-48,379371	-28,376419	-10,827927	67
243 9351,5	-15,932546	+49,018636	+25,766544	67	243 9386,5	-44,486589	-33,737809	-13,836291	67
243 9352,0	-22,622247	+46,297868	+24,912062	67	243 9387,0	-39,921834	-38,582546	-16,632792	67
243 9352,5	-28,968798	+42,864603	+23,673524	67	243 9387,5	-34,767408	-42,849704	-19,180345	67
243 9353,0	-34,866147	+38,760484	+22,063690	67	243 9388,0	-29,111420	-46,490506	-21,447576	67
243 9353,5	-40,213250	+34,041327	+20,102845	67	243 9388,5	-23,045491	-49,468131	-23,408913	67
243 9354,0	-44,917147	+28,776527	+17,818706	67	243 9389,0	-16,662768	-51,757164	-25,044440	67
243 9354,5	-48,895895	+23,047735	+15,246022	67	243 9389,5	-10,056298	-53,342950	-26,339718	67
243 9355,0	-52,081142	+16,946912	+12,425755	67	243 9390,0	-3,317658	-54,220741	-27,285430	67
243 9355,5	-54,420289	+10,573922	+9,404068	67	243 9390,5	+3,464089	-54,394789	-27,877023	67
243 9356,0	-55,877870	+4,033704	+6,230985	67	243 9391,0	+10,203205	-53,877527	-28,114340	67

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z	J.D.	x	y	z		
243 9391,5	+16,817868	-52,688751	-28,001265	67	243 9426,5	+59,868538	+19,333924	+5,426671	67
243 9392,0	+23,230653	-50,854864	-27,545359	67	243 9427,0	+57,318488	+24,718056	+8,372054	67
243 9392,5	+29,368820	-48,408169	-26,757539	67	243 9427,5	+54,110408	+29,820632	+11,222746	67
243 9393,0	+35,164616	-45,386328	-25,651824	67	243 9428,0	+50,276239	+34,579128	+13,944352	67
243 9393,5	+40,555475	-41,831778	-24,245058	67	243 9428,5	+45,855429	+38,933649	+16,503265	67
243 9394,0	+45,484172	-37,791249	-22,556666	67	243 9429,0	+40,894787	+42,827633	+18,867018	67
243 9394,5	+49,899062	-33,315374	-20,608490	67	243 9429,5	+35,448261	+46,208558	+21,004684	67
243 9395,0	+53,754175	-28,458197	-18,424535	67	243 9430,0	+29,576726	+49,028764	+22,887297	67
243 9395,5	+57,009505	-23,276859	-16,030838	67	243 9430,5	+23,347501	+51,246128	+24,488250	67
243 9396,0	+59,631113	-17,831132	-13,455237	67	243 9431,0	+16,833868	+52,824826	+25,783693	67
243 9396,5	+61,591388	-12,183045	-10,727200	67	243 9431,5	+10,114461	+53,736042	+26,752977	67
243 9397,0	+62,869188	-6,396422	-7,877606	67	243 9432,0	+3,272516	+53,958559	+27,378991	67
243 9397,5	+63,450064	-0,536475	-4,938537	67	243 9432,5	-3,604951	+53,479424	+27,648570	67
243 9398,0	+63,326359	+5,330706	-1,943058	67	243 9433,0	-10,428067	+52,294426	+27,552800	67
243 9398,5	+62,497468	+11,138623	+1,075027	67	243 9433,5	-17,105132	+50,408611	+27,087382	67
243 9399,0	+60,969805	+16,820899	+4,081445	67	243 9434,0	-23,543752	+47,836626	+26,252878	67
243 9399,5	+58,756983	+22,311823	+7,041704	67	243 9434,5	-29,652089	+44,603071	+25,054984	67
243 9400,0	+55,879798	+27,546901	+9,921387	67	243 9435,0	-35,340193	+40,742643	+23,504710	67
243 9400,5	+52,366177	+32,463406	+12,686430	67	243 9435,5	-40,521456	+36,300169	+21,618509	67
243 9401,0	+48,251213	+37,000991	+15,303448	67	243 9436,0	-45,114199	+31,330565	+19,418366	67
243 9401,5	+43,576963	+41,102239	+17,740013	67	243 9436,5	-49,043295	+25,898439	+16,931728	67
243 9402,0	+38,392386	+44,713289	+19,964989	67	243 9437,0	-52,241894	+20,077582	+14,191355	67
243 9402,5	+32,753122	+47,784441	+21,948864	67	243 9437,5	-54,653148	+13,950121	+11,235037	67
243 9403,0	+26,721259	+50,270799	+23,664073	67	243 9438,0	-56,231868	+7,605366	+8,105111	67
243 9403,5	+20,365002	+52,132846	+25,085335	67	243 9438,5	-56,946135	+1,138364	+4,847851	67
243 9404,0	+13,758371	+53,337168	+26,190038	67	243 9439,0	-56,778527	-5,351902	+1,512630	67
243 9404,5	+6,980732	+53,857055	+26,958587	67	243 9439,5	-55,727175	-11,764591	+1,849058	67
243 9405,0	+0,116319	+53,673265	+27,374827	67	243 9440,0	-53,806180	-17,999266	+5,184727	67
243 9405,5	-6,746425	+52,774767	+27,426475	67	243 9440,5	-51,045742	-23,958327	+8,442137	67
243 9406,0	-13,515620	+51,159391	+27,105516	67	243 9441,0	-47,491519	-29,549388	+11,570560	67
243 9406,5	-20,096908	+48,834661	+26,408692	67	243 9441,5	-43,203506	-34,687537	+14,522023	67
243 9407,0	-26,394625	+45,818455	+25,337930	67	243 9442,0	-38,254357	-39,297291	+17,252428	67
243 9407,5	-32,313187	+42,139588	+23,900756	67	243 9442,5	-32,727319	-43,314172	+19,722519	67
243 9408,0	-37,758774	+37,838323	+22,110671	67	243 9443,0	-26,713824	-46,685789	+21,898621	67
243 9408,5	-42,641255	+32,966617	+19,987418	67	243 9443,5	-20,311049	-49,372500	+23,753155	67
243 9409,0	-46,876319	+27,588044	+17,557117	67	243 9444,0	-13,619323	-51,347399	+25,264828	67
243 9409,5	-50,387797	+21,777371	+14,852213	67	243 9444,5	-6,739884	-52,596116	+26,418701	67
243 9410,0	-53,110043	+15,619679	+11,911208	67	243 9445,0	+0,227257	-53,116047	+27,205959	67
243 9410,5	-54,990288	+9,208961	+8,778116	67	243 9445,5	+7,185057	-52,915382	+27,623536	67
243 9411,0	-55,990610	+2,646191	+5,501643	67	243 9446,0	+14,040836	-52,012107	+27,673707	67
243 9411,5	-56,089742	-3,962995	+2,134116	67	243 9446,5	+20,707331	-50,432686	+27,363503	67
243 9412,0	-55,283996	-10,511067	-1,269846	67	243 9447,0	+27,103440	-48,210987	+26,704205	67
243 9412,5	-53,587744	-16,891498	-4,654778	67	243 9447,5	+33,154654	-45,387089	+25,710768	67
243 9413,0	-51,032985	-23,001707	-7,965907	67	243 9448,0	+38,793321	-42,006352	+24,401370	67
243 9413,5	-47,668150	-28,745773	-11,150624	67	243 9448,5	+43,958714	-38,118456	+22,796928	67
243 9414,0	-43,556389	-34,036829	-14,159836	67	243 9449,0	+48,596995	-33,776698	+20,920726	67
243 9414,5	-38,773179	-38,798882	-16,949077	67	243 9449,5	+52,661115	-29,037308	+18,798054	67
243 9415,0	-33,403823	-42,968135	-19,479377	67	243 9450,0	+56,110716	-23,958966	+16,455968	67
243 9415,5	-27,540609	-46,493580	-21,717765	67	243 9450,5	+58,911994	-18,602333	+13,923030	67
243 9416,0	-21,280275	-49,337233	-23,637589	67	243 9451,0	+61,037572	-13,029694	+11,229103	67
243 9416,5	-14,721534	-51,473746	-25,218499	67	243 9451,5	+62,466546	-7,304681	+8,405238	67
243 9417,0	-7,962955	-52,889673	-26,446235	67	243 9452,0	+63,184419	-1,491958	+5,483484	67
243 9417,5	+1,101223	-53,582626	-27,312316	67	243 9452,5	+63,183192	+4,343048	+2,496770	67
243 9418,0	+5,770241	-53,560156	-27,813584	67	243 9453,0	+62,461426	+10,134431	+0,521245	67
243 9418,5	+12,562322	-52,838660	-27,951718	67	243 9453,5	+61,024509	+15,816136	+3,536315	67
243 9419,0	+19,190938	-51,442284	-27,732738	67	243 9454,0	+58,884783	+21,322361	+6,513803	67
243 9419,5	+25,577525	-49,401959	-27,166531	67	243 9454,5	+56,061756	+26,587975	+9,418893	67
243 9420,0	+31,649310	-46,754400	-26,266394	67	243 9455,0	+52,582315	+31,549062	+12,216831	67
243 9420,5	+37,339513	-43,541469	-25,048689	67	243 9455,5	+48,480961	+36,143556	+14,873266	67
243 9421,0	+42,587369	-39,809345	-23,532446	67	243 9456,0	+43,799820	+40,311924	+17,354557	67
243 9421,5	+47,338170	-35,608017	-21,739102	67	243 9456,5	+38,588729	+43,997923	+19,628204	67
243 9422,0	+51,543300	-30,990810	-19,692247	67	243 9457,0	+32,905158	+47,149522	+21,663287	67
243 9422,5	+55,160181	-26,013900	-17,417400	67	243 9457,5	+26,813938	+49,719755	+23,430937	67
243 9423,0	+58,152330	-20,735984	-14,941814	67	243 9458,0	+20,386861	+51,667639	+24,904845	67
243 9423,5	+60,489441	-15,217948	-12,294345	67	243 9458,5	+13,702117	+52,959142	+26,061789	67
243 9424,0	+62,147492	-9,522540	-9,505257	67	243 9459,0	+6,843487	+53,568028	+26,882118	67
243 9424,5	+63,108828	-3,714005	-6,606082	67	243 9459,5	-0,100613	+53,476630	+27,350250	67
243 9425,0	+63,362398	+2,142225	-3,629448	67	243 9460,0	-7,038261	+52,676597	+27,455098	67
243 9425,5	+62,903924	+7,979957	-0,608877	67	243 9460,5	-13,875334	+51,169418	+27,190475	67
243 9426,0	+61,736037	+13,732650	+2,421392	67	243 9461,0	-20,516908	+48,966723	+26,555322	67

J.D.	x	y	z	J.D.	x	y	z		
243 9461,5	-26,868791	+46,090621	+25,554006	67	243 9496,5	-40,787868	-38,711402	-16,943319	67
243 9462,0	-32,839013	+42,573512	+24,196334	67	243 9497,0	-35,535854	-42,786071	-19,393884	67
243 9462,5	-38,339498	+38,458058	+22,497659	67	243 9497,5	-29,774728	-46,258051	-21,571131	67
243 9463,0	-43,287531	+33,796633	+20,478708	67	243 9498,0	-23,590225	-49,085051	-23,447348	67
243 9463,5	-47,607341	+28,650817	+18,165441	67	243 9498,5	-17,072692	-51,235111	-24,999801	67
243 9464,0	-51,231491	+23,090553	+15,588713	67	243 9499,0	-10,315462	-52,686707	-26,210907	67
243 9464,5	-54,102217	+17,193208	+12,783906	67	243 9499,5	- 3,413293	-53,428883	-27,068405	67
243 9465,0	-56,172687	+11,042454	+ 9,790428	67	243 9500,0	+ 3,539208	-53,460986	-27,565349	67
243 9465,5	-57,408002	+ 4,726953	+ 6,651132	67	243 9500,5	+10,449050	-52,792255	-27,699975	67
243 9466,0	-57,786116	- 1,661078	+ 3,411630	67	243 9501,0	+17,226245	-51,441333	-27,475573	67
243 9466,5	-57,298463	- 8,027427	+ 0,119554	67	243 9501,5	+23,784962	-49,435413	-26,900112	67
243 9467,0	-55,950426	-14,277600	-3,176293	67	243 9502,0	+30,044606	-46,809533	-25,985961	67
243 9467,5	-53,761403	-20,318554	- 6,426824	67	243 9502,5	+35,930636	-43,605599	-24,749445	67
243 9468,0	-50,764643	-26,060511	- 9,583602	67	243 9503,0	+41,375213	-39,871442	-23,210412	67
243 9468,5	-47,006740	-31,418747	-12,599808	67	243 9503,5	+46,317621	-35,659870	-21,391763	67
243 9469,0	-42,546689	-36,315272	-15,431162	67	243 9504,0	+50,704631	-31,027773	-19,319028	67
243 9469,5	-37,454722	-40,680400	-18,036812	67	243 9504,5	+54,490484	-26,035198	-17,019888	67
243 9470,0	-31,810717	-44,454077	-20,380133	67	243 9505,0	+57,637077	-20,744648	-14,523819	67
243 9470,5	-25,702415	-47,586900	-22,429386	67	243 9505,5	+60,113686	-15,220289	-11,861687	67
243 9471,0	-19,223470	-50,040897	-24,158255	67	243 9506,0	+61,896957	- 9,527424	- 9,065438	67
243 9471,5	-12,471327	-51,789835	-25,546163	67	243 9506,5	+62,970659	- 3,731922	- 6,167832	67
243 9472,0	- 5,545181	-52,819244	-26,578428	67	243 9507,0	+63,325494	+2,100203	- 3,202174	67
243 9472,5	+ 1,456001	-53,126144	-27,246280	67	243 9507,5	+62,958914	+ 7,903157	- 0,202134	67
243 9473,0	+ 8,435284	-52,718382	-27,546654	67	243 9508,0	+61,875049	+13,611704	+ 2,798445	67
243 9473,5	+15,299340	-51,613825	-27,481877	67	243 9508,5	+60,084459	+19,161415	+ 5,765674	67
243 9474,0	+21,959724	-49,839311	-27,059241	67	243 9509,0	+57,604272	+24,488967	+ 8,665798	67
243 9474,5	+28,333900	-47,429639	-26,290559	67	243 9509,5	+54,458026	+29,532376	+11,465302	67
243 9475,0	+34,345963	-44,426414	-25,191608	67	243 9510,0	+50,675924	+34,231379	+14,131098	67
243 9475,5	+39,927128	-40,876941	-23,781626	67	243 9510,5	+46,294796	+38,527711	+16,630680	67
243 9476,0	+45,015994	-36,833246	-22,082806	67	243 9511,0	+41,358339	+42,365598	+18,932357	67
243 9476,5	+49,558581	-32,351084	-20,119798	67	243 9511,5	+35,917258	+45,692284	+21,005521	67
243 9477,0	+53,508385	-27,489220	-17,919354	67	243 9512,0	+30,029390	+48,458640	+22,820951	67
243 9477,5	+56,826178	-22,308678	-15,509913	67	243 9512,5	+23,759817	+50,620007	+24,351240	67
243 9478,0	+59,479806	-16,872155	-12,921290	67	243 9513,0	+17,180793	+52,137037	+25,571236	67
243 9478,5	+61,444098	-11,243598	-10,184456	67	243 9513,5	+10,371565	+52,976664	+26,458554	67
243 9479,0	+62,700630	- 5,487775	- 7,331292	67	243 9514,0	+ 3,418005	+53,113381	+26,994266	67
243 9479,5	+63,237619	+ 0,330038	-4,394424	67	243 9514,5	- 3,588124	+52,530188	+27,163424	67
243 9480,0	+63,049802	+ 6,144325	- 1,407082	67	243 9515,0	-10,550138	+51,219968	+26,955857	67
243 9480,5	+62,138497	+11,889605	+ 1,597057	67	243 9515,5	-17,367776	+49,186396	+26,366699	67
243 9481,0	+60,511552	+17,500661	+4,583975	67	243 9516,0	-23,938946	+46,444977	+25,397076	67
243 9481,5	+58,183516	+22,912854	+ 7,519470	67	243 9516,5	-30,161733	+43,023618	+24,054504	67
243 9482,0	+55,175796	+28,062453	+10,369315	67	243 9517,0	-35,936715	+38,962940	+22,353221	67
243 9482,5	+51,516809	+32,887011	+13,099438	67	243 9517,5	-41,169506	+34,316164	+20,314298	67
243 9483,0	+47,242197	+37,325859	+15,676169	67	243 9518,0	-45,773166	+29,148385	+17,965416	67
243 9483,5	+42,395103	+41,320721	+18,066527	67	243 9518,5	-49,670741	+23,535545	+15,340516	67
243 9484,0	+37,026240	+44,816377	+20,238567	67	243 9519,0	-52,797276	+17,562748	+12,479075	67
243 9484,5	+31,194032	+47,761518	+22,161797	67	243 9519,5	-55,101692	+11,322381	+ 9,425235	67
243 9485,0	+24,964528	+50,109627	+23,807650	67	243 9520,0	-56,547933	+9,911825	+6,226736	67
243 9485,5	+18,411214	+51,820088	+25,150052	67	243 9520,5	-57,115685	- 1,568876	+ 2,933738	67
243 9486,0	+11,614536	+52,859109	+26,165945	67	243 9521,0	-56,800580	- 8,019388	- 0,402378	67
243 9486,5	+ 4,661248	+53,200949	+26,835951	67	243 9521,5	-55,613717	-14,341329	- 3,730197	67
243 9487,0	- 2,356552	+52,828910	+27,144956	67	243 9522,0	-53,580906	-20,440307	- 6,999374	67
243 9487,5	- 9,342654	+51,736311	+27,082692	67	243 9522,5	-50,741472	-26,227657	-10,161595	67
243 9488,0	-16,198264	+49,927259	+26,644246	67	243 9523,0	-47,146860	-31,621903	-13,171452	67
243 9488,5	-22,823732	+47,417238	+25,830481	67	243 9523,5	-42,859022	-36,549868	-15,987100	67
243 9489,0	-29,120459	+44,233335	+24,648286	67	243 9524,0	-37,948796	-40,947500	-18,570796	67
243 9489,5	-34,992978	+40,414285	+23,110753	67	243 9524,5	-32,494291	-44,760456	-20,889326	67
243 9490,0	-40,350934	+36,009985	+21,237061	67	243 9525,0	-26,579217	-47,944411	-22,914255	67
243 9490,5	-45,111118	+31,080837	+19,052279	67	243 9525,5	-20,291368	-50,465147	-24,622092	67
243 9491,0	-49,199281	+25,966689	+16,586970	67	243 9526,0	-13,721188	-52,298625	-25,994418	67
243 9491,5	-52,551680	+19,935505	+13,876592	67	243 9526,5	- 6,960352	-53,430693	-27,017825	67
243 9492,0	-55,116447	+13,881887	+10,960861	67	243 9527,0	- 0,100531	-53,856878	-27,683912	67
243 9492,5	-56,854527	+ 7,625385	+7,882939	67	243 9527,5	+ 6,767799	-53,581976	-27,989137	67
243 9493,0	-57,740382	+1,258776	+4,688595	67	243 9528,0	+13,556438	-52,619565	-27,934644	67
243 9493,5	-57,762274	- 5,123705	+ 1,425331	67	243 9528,5	+20,180444	-50,991503	-27,526075	67
243 9494,0	-56,922380	-11,428111	- 1,858521	67	243 9529,0	+26,559029	-48,727280	-26,773288	67
243 9494,5	-55,236416	-17,562435	-5,114660	67	243 9529,5	+32,616337	-45,863388	-25,690093	67
243 9495,0	-52,733220	-23,438192	- 8,295674	67	243 9530,0	+38,282150	-42,442611	-24,293920	67
243 9495,5	-49,453959	-28,971865	-11,355825	67	243 9530,5	+43,492430	-38,513252	-22,605476	67
243 9496,0	-45,451217	-34,086209	-14,251786	67	243 9531,0	+48,189814	-34,128406	-20,648388	67

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z	J.D.	x	y	z
243 9531,5	+52,323892	-29,345136	-18,448793	243 9566,5	+32,423061	+48,352273	+23,214013
243 9532,0	+55,851546	-24,223787	-16,035035	243 9567,0	+26,437253	+50,746060	+24,836215
243 9532,5	+58,736972	-18,827186	-13,437213	243 9567,5	+20,138874	+52,529410	+26,159661
243 9533,0	+60,951815	-13,219983	-10,686879	243 9568,0	+13,598422	+53,670781	+27,163392
243 9533,5	+62,475044	-7,467981	-7,816671	243 9568,5	+6,891479	+54,144534	+27,829226
243 9534,0	+63,292953	-1,637569	-4,860019	243 9569,0	+0,098402	+53,931555	+28,142074
243 9534,5	+63,398934	+4,204850	-1,850841	243 9569,5	-6,696056	+53,019965	+28,090360
243 9535,0	+62,793397	+9,993308	+1,176708	243 9570,0	-13,403276	+51,406016	+27,666505
243 9535,5	+61,483484	+15,662707	+4,188462	243 9570,5	-19,931516	+49,094850	+26,867387
243 9536,0	+59,483013	+21,149209	+7,150469	243 9571,0	-26,186887	+46,101447	+25,694886
243 9536,5	+56,812262	+26,390566	+10,029168	243 9571,5	-32,074625	+42,451382	+24,156367
243 9537,0	+53,497811	+31,326422	+12,791561	243 9572,0	-37,500713	+38,181596	+22,265183
243 9537,5	+49,572563	+35,898653	+15,405385	243 9572,5	-42,373813	+33,340885	+20,041057
243 9538,0	+45,075651	+40,051696	+17,839298	243 9573,0	-46,607476	+27,990067	+17,510308
243 9538,5	+40,052440	+43,732901	+20,063058	243 9573,5	-50,122775	+22,201845	+14,705940
243 9539,0	+34,554496	+46,892894	+22,047712	243 9574,0	-52,850797	+16,059966	+11,667377
243 9539,5	+28,639761	+49,486199	+23,765916	243 9574,5	-54,735321	+9,657971	+8,439956
243 9540,0	+22,372419	+51,471624	+25,192144	243 9575,0	-55,735218	+3,097275	+5,074084
243 9540,5	+15,823006	+52,813135	+26,303137	243 9575,5	-55,826333	-3,515304	+1,624077
243 9541,0	+9,068234	+53,480509	+27,078248	243 9576,0	-55,002822	-10,070396	-1,853275
243 9541,5	+2,190770	+53,450282	+27,499964	243 9576,5	-53,277657	-16,459206	-5,300290
243 9542,0	-4,721161	+52,706802	+27,554459	243 9577,0	-50,682335	-22,576676	-8,660068
243 9542,5	-11,574468	+51,243215	+27,232173	243 9577,5	-47,265646	-28,324407	-11,878105
243 9543,0	-18,272142	+49,062662	+26,528476	243 9578,0	-43,091859	-33,613231	-14,903742
243 9543,5	-24,714598	+46,179276	+25,444282	243 9578,5	-38,238216	-38,365179	-17,691355
243 9544,0	-30,801367	+42,619128	+23,986655	243 9579,0	-32,792197	-42,514827	-20,201227
243 9544,5	-36,433196	+38,420892	+22,169272	243 9579,5	-26,848681	-46,010044	-22,400129
243 9545,0	-41,514468	+33,636172	+20,012754	243 9580,0	-20,507161	-48,812156	-24,261561
243 9545,5	-45,955876	+28,329332	+17,544765	243 9580,5	-13,869179	-50,895504	-25,765709
243 9546,0	-49,677148	+22,576773	+14,799780	243 9581,0	-7,036186	-52,246898	-26,899275
243 9546,5	-52,609828	+16,465672	+11,818639	243 9581,5	-0,107669	-52,864556	-27,655049
243 9547,0	-54,699570	+10,092048	+8,647673	243 9582,0	+6,820286	-52,757079	-28,031467
243 9547,5	-55,908178	+3,558427	+5,337628	243 9582,5	+13,656097	-51,942343	-28,032096
243 9548,0	-56,214846	+3,028926	+1,942309	243 9583,0	+20,313500	-50,446392	-27,665115
243 9548,5	-55,616736	-9,562919	-1,482897	243 9583,5	+26,712097	-48,302377	-26,942787
243 9549,0	-54,128797	-15,938542	-4,882543	243 9584,0	+32,777769	-45,549659	-25,881027
243 9549,5	-51,782753	-22,055545	-8,202575	243 9584,5	+38,442860	-42,232910	-24,498933
243 9550,0	-48,625674	-27,820776	-11,391632	243 9585,0	+43,646365	-38,401368	-22,818416
243 9550,5	-44,718017	-33,150075	-14,402167	243 9585,5	+48,334000	-34,108186	-20,863856
243 9551,0	-40,131323	-37,969585	-17,191255	243 9586,0	+52,458234	-29,409783	-18,661776
243 9551,5	-34,945980	-42,216666	-19,721229	243 9586,5	+55,978344	-24,365346	-16,240581
243 9552,0	-29,248890	-45,840261	-21,960017	243 9587,0	+58,860452	-19,036292	-13,630269
243 9552,5	-23,131376	-48,800968	-23,881300	243 9587,5	+61,077514	-13,485786	-10,862208
243 9553,0	-16,687222	-51,070739	-25,464509	243 9588,0	+62,609367	-7,778292	-7,968868
243 9553,5	-10,011038	-52,632481	-26,694697	243 9588,5	+63,442733	-1,979102	-4,983600
243 9554,0	-3,196758	-53,479337	-27,562286	243 9589,0	+63,571245	+3,846134	-1,940385
243 9554,5	+3,663529	-53,614085	-28,062811	243 9589,5	+62,995412	+9,631844	+1,126402
243 9555,0	+10,480592	-53,048358	-28,196603	243 9590,0	+61,722683	+15,313036	+4,182244
243 9555,5	+17,168891	-51,801932	-27,968453	243 9590,5	+59,767277	+20,825749	+7,192744
243 9556,0	+23,647263	-49,901977	-27,387284	243 9591,0	+57,150257	+26,107580	+10,123879
243 9556,5	+29,839471	-47,382336	-26,465806	243 9591,5	+53,899292	+31,098133	+12,942258
243 9557,0	+35,674710	-44,282921	-25,220239	243 9592,0	+50,048593	+35,739556	+15,615413
243 9557,5	+41,087990	-40,648989	-23,669951	243 9592,5	+45,638691	+39,977013	+18,112041
243 9558,0	+46,020500	-36,530560	-21,837192	243 9593,0	+40,716216	+43,759148	+20,402293
243 9558,5	+50,419857	-31,981719	-19,746744	243 9593,5	+35,333630	+47,038559	+22,458009
243 9559,0	+54,240374	-27,060071	-17,425653	243 9594,0	+29,548986	+49,772293	+24,253016
243 9559,5	+57,443281	-21,826125	-14,902928	243 9594,5	+23,425586	+51,922303	+25,763373
243 9560,0	+59,996742	-16,342627	-12,209202	243 9595,0	+17,031640	+53,455892	+26,967631
243 9560,5	+61,876080	-10,674066	-9,376464	243 9595,5	+10,439890	+54,346195	+27,847118
243 9561,0	+63,063770	-4,886046	-6,437767	243 9596,0	+3,727208	+54,572684	+28,386225
243 9561,5	+63,549382	+0,955278	-3,426897	243 9596,5	-3,025894	+54,121626	+28,572671
243 9562,0	+63,329624	+6,783712	-0,378132	243 9597,0	-9,735778	+52,986630	+28,397830
243 9562,5	+62,408235	+12,533568	+2,674068	243 9597,5	-16,316312	+51,169179	+27,857059
243 9563,0	+60,795776	+18,140138	+5,695306	243 9598,0	-22,679626	+48,679232	+26,950042
243 9563,5	+58,509625	+23,540194	+8,651506	243 9598,5	-28,736987	+45,535706	+25,681114
243 9564,0	+55,573686	+28,672739	+11,509159	243 9599,0	-34,399926	+41,767092	+24,059653
243 9564,5	+52,018325	+33,477685	+14,235552	243 9599,5	-39,581445	+37,411813	+22,100328
243 9565,0	+47,880046	+37,899767	+16,798974	243 9600,0	-44,197604	+32,518630	+19,823439
243 9565,5	+43,201470	+41,885418	+19,168951	243 9600,5	-48,169181	+27,146739	+17,255042
243 9566,0	+38,031068	+45,384873	+21,316426	243 9601,0	-51,423707	+21,365697	+14,427064

J.D.	x	y	z	J.D.	x	y	z		
243 9601,5	-53,897514	+15,254936	+11,377154	67	243 9636,5	+ 2,990764	-51,663154	-27,236444	67
243 9602,0	-55,537952	+ 8,902899	+ 8,148396	67	243 9637,0	+10,092098	-51,158403	-27,408982	67
243 9602,5	-56,305587	+ 2,405695	+ 4,788721	67	243 9637,5	+17,045630	-49,933074	-27,194618	67
243 9603,0	-56,176056	- 4,134733	+ 1,350070	67	243 9638,0	+23,758113	-48,019873	-26,604779	67
243 9603,5	-55,141742	-10,612902	- 2,112700	67	243 9638,5	+30,143981	-45,459873	-25,655763	67
243 9604,0	-53,212766	-16,922465	- 5,543169	67	243 9639,0	+36,125990	-42,301053	-24,367999	67
243 9604,5	-50,417360	-22,959131	- 8,884854	67	243 9639,5	+41,635578	-38,596942	-22,765371	67
243 9605,0	-46,801425	-28,623635	-12,082800	67	243 9640,0	+46,612931	-34,405372	-20,874563	67
243 9605,5	-42,427314	-33,824560	-15,085143	67	243 9640,5	+51,006894	-29,787442	-18,724503	67
243 9606,0	-37,371867	-38,480769	-17,844494	67	243 9641,0	+54,774699	-24,806566	-16,345866	67
243 9606,5	-31,723986	-42,523427	-20,319165	67	243 9641,5	+57,881709	-19,527761	-13,770650	67
243 9607,0	-25,581632	-45,897243	-22,473999	67	243 9642,0	+60,301075	-14,017012	-11,031854	67
243 9607,5	-19,048868	-48,561179	-24,280937	67	243 9642,5	+62,013399	- 8,340772	- 8,163173	67
243 9608,0	-12,232855	-50,488477	-25,719210	67	243 9643,0	+63,006458	- 2,565553	- 5,198773	67
243 9608,5	- 5,241133	-51,666160	-26,775258	67	243 9643,5	+63,275010	+ 3,242409	- 2,173102	67
243 9609,0	+ 1,820764	-52,094073	-27,442377	67	243 9644,0	+62,820507	+ 9,017481	+ 0,879300	67
243 9609,5	+ 8,851227	-51,783716	-27,720225	67	243 9644,5	+61,651002	+14,694889	+ 3,923946	67
243 9610,0	+15,754058	-50,756916	-27,614211	67	243 9645,0	+59,781168	+20,211056	+ 6,926576	67
243 9610,5	+22,439558	-49,044369	-27,134822	67	243 9645,5	+57,232079	+25,503867	+ 9,853308	67
243 9611,0	+28,825197	-46,684304	-26,296936	67	243 9646,0	+54,031308	+30,513047	+12,670835	67
243 9611,5	+34,836056	-43,721274	-25,119233	67	243 9646,5	+50,212884	+35,180548	+15,346628	67
243 9612,0	+40,404963	-40,204953	-23,623572	67	243 9647,0	+45,817305	+39,450997	+17,849185	67
243 9612,5	+45,472522	-36,189207	-21,834499	67	243 9647,5	+40,891430	+43,272180	+20,148275	67
243 9613,0	+49,987025	-31,731243	-19,778792	67	243 9648,0	+35,488461	+46,595644	+22,215266	67
243 9613,5	+53,904276	-26,890884	-17,485082	67	243 9648,5	+29,667713	+49,377261	+24,023429	67
243 9614,0	+57,187430	-21,729987	-14,983514	67	243 9649,0	+23,494409	+51,577926	+25,548333	67
243 9614,5	+59,806768	-16,311901	-12,305479	67	243 9649,5	+17,039257	+53,164181	+26,768166	67
243 9615,0	+61,739665	-10,701086	- 9,483389	67	243 9650,0	+10,377976	+54,108913	+27,664167	67
243 9615,5	+62,970306	- 4,962664	- 6,550428	67	243 9650,5	+ 3,590675	+54,392009	+28,220977	67
243 9616,0	+63,489747	+ 0,837922	- 3,540385	67	243 9651,0	- 3,238906	+54,000960	+28,427015	67
243 9616,5	+63,295739	+ 6,635267	- 0,487445	67	243 9651,5	-10,024319	+52,931435	+28,274836	67
243 9617,0	+62,392783	+12,364390	+ 2,574001	67	243 9652,0	-16,677381	+51,187672	+27,761393	67
243 9617,5	+60,792030	+17,961073	+ 5,609551	67	243 9652,5	-23,109339	+48,782950	+26,888346	67
243 9618,0	+58,511345	+23,362313	+ 8,585018	67	243 9653,0	-29,232081	+45,739703	+25,662213	67
243 9618,5	+55,575255	+28,506726	+11,466657	67	243 9653,5	-34,959410	+42,089670	+24,094500	67
243 9619,0	+52,014895	+33,335025	+14,221407	67	243 9654,0	-40,208379	+37,873792	+22,201738	67
243 9619,5	+47,867986	+37,790543	+16,817175	67	243 9654,5	-44,900727	+33,142066	+20,005493	67
243 9620,0	+43,178630	+41,819716	+19,223102	67	243 9655,0	-48,964174	+27,953076	+17,532200	67
243 9620,5	+37,997249	+45,372732	+21,409909	67	243 9655,5	-52,333802	+22,373494	+14,812963	67
243 9621,0	+32,380209	+48,403991	+23,350150	67	243 9656,0	-54,953425	+16,477367	+11,883285	67
243 9621,5	+26,389592	+50,872780	+25,018600	67	243 9656,5	-56,776777	+10,345199	+ 8,782642	67
243 9622,0	+20,092735	+52,743743	+26,392509	67	243 9657,0	-57,768705	+ 4,062911	+ 5,554013	67
243 9622,5	+13,561791	+53,987503	+27,451973	67	243 9657,5	-57,906256	- 2,279415	+ 2,243278	67
243 9623,0	+ 6,873164	+54,581129	+28,180208	67	243 9658,0	-57,179505	- 8,588944	+ 1,101467	67
243 9623,5	+ 0,106888	+54,508722	+28,563892	67	243 9658,5	-55,592257	-14,771689	- 4,430708	67
243 9624,0	- 6,654086	+53,761797	+28,593423	67	243 9659,0	-53,162464	-20,734213	- 7,694388	67
243 9624,5	-13,324650	+52,339721	+28,263189	67	243 9659,5	-49,922339	-26,385479	-10,842862	67
243 9625,0	-19,818421	+50,250152	+27,571849	67	243 9660,0	-45,918146	-31,638751	-13,827915	67
243 9625,5	-26,048645	+47,509292	+26,522520	67	243 9660,5	-41,209538	-36,413493	-16,603798	67
243 9626,0	-31,929236	+44,142189	+25,123014	67	243 9661,0	-35,868525	-40,637157	-19,128218	67
243 9626,5	-37,375892	+40,182926	+23,385997	67	243 9661,5	-29,978063	-44,246875	-21,363322	67
243 9627,0	-42,307305	+35,674736	+21,329112	67	243 9662,0	-23,630195	-47,190766	-23,276485	67
243 9627,5	-46,646488	+30,669979	+18,975070	67	243 9662,5	-16,924046	-49,429115	-24,841043	67
243 9628,0	-50,322220	+25,230007	+16,351653	67	243 9663,0	- 9,963445	-50,934931	-26,036730	67
243 9628,5	-53,270553	+19,424805	+13,491625	67	243 9663,5	- 2,854561	-51,694255	-26,849990	67
243 9629,0	-55,436380	+13,332433	+10,432535	67	243 9664,0	+ 4,296452	-51,705957	-27,273988	67
243 9629,5	-56,775141	+ 7,038215	+ 7,216383	67	243 9664,5	+11,385691	-50,981174	-27,308468	67
243 9630,0	-57,254270	+ 0,633580	+ 3,889129	67	243 9665,0	+18,313474	-49,542443	-26,959398	67
243 9630,5	-56,854795	- 5,785349	+ 0,500024	67	243 9665,5	+47,598008	-47,422478	-26,238437	67
243 9631,0	-55,572552	-12,119571	- 2,899250	67	243 9666,0	+31,316719	-44,662940	-25,162365	67
243 9631,5	-53,419049	-18,269248	- 6,255609	67	243 9666,5	+37,227163	-41,312945	-23,752355	67
243 9632,0	-50,422030	-24,136057	- 9,515758	67	243 9667,0	+42,647721	-37,427770	-22,033335	67
243 9632,5	-46,625369	-29,625630	-12,627488	67	243 9667,5	+47,517828	-33,067438	-20,033256	67
243 9633,0	-42,088384	-34,650025	-15,541006	67	243 9668,0	+51,786082	-28,295539	-17,782496	67
243 9633,5	-36,884560	-39,130044	-18,210230	67	243 9668,5	+55,410086	-23,178138	-15,313250	67
243 9634,0	-31,099720	-42,997294	-20,593998	67	243 9669,0	+58,356232	-17,782870	-12,659057	67
243 9634,5	-24,829659	-46,195816	-22,657046	67	243 9669,5	+60,599246	-12,178110	- 9,854353	67
243 9635,0	-18,177453	-48,683143	-24,370744	67	243 9670,0	+62,121892	- 6,432398	- 6,934111	67
243 9635,5	-11,250658	-50,430844	-25,713550	67	243 9670,5	+62,914553	- 0,613885	- 3,933563	67
243 9636,0	- 4,158494	-51,424489	-26,671170	67	243 9671,0	+62,974829	+ 5,210061	- 0,887947	67

J.D.	x	y	z	J.D.	x	y	z		
243 9671,5	+62,307237	+10,973190	+2,167680	67	243 9696,5	+58,953412	-16,174188	-11,608394	68
243 9672,0	+60,922924	+16,610640	+5,198612	67	243 9697,0	+60,987572	-10,485227	-8,729830	68
243 9672,5	+58,839555	+22,059218	+8,170632	67	243 9697,5	+62,297844	-4,677952	-5,749963	68
243 9673,0	+56,081036	+27,257605	+11,050155	67	243 9698,0	+62,876626	+1,178340	-2,704871	68
243 9673,5	+52,677571	+32,146676	+13,804388	67	243 9698,5	+62,723855	+7,015401	+0,369506	68
243 9674,0	+48,665474	+36,669741	+16,401464	67	243 9699,0	+61,846658	+12,766448	+3,437602	68
243 9674,5	+44,087297	+40,772945	+18,810657	67	243 9699,5	+60,258917	+18,366507	+6,464427	68
243 9675,0	+38,991721	+44,405680	+21,002600	67	243 9700,0	+57,980991	+23,752708	+9,415755	68
243 9675,5	+33,433559	+47,521037	+22,949521	67	243 9700,5	+55,039476	+28,864526	+12,258242	68
243 9676,0	+27,473684	+50,076406	+24,625572	67	243 9701,0	+51,466985	+33,644033	+14,959589	68
243 9676,5	+21,178907	+52,034138	+26,007179	67	243 9701,5	+47,301990	+38,036112	+17,488665	68
Epoch 1968,0					243 9702,0	+42,588771	+41,988751	+19,815661	68
243 9668,0	+51,794132	-28,283963	-17,777464	68	243 9702,5	+37,377343	+45,453339	+21,912257	68
243 9668,5	+55,416753	-23,165753	-15,307866	68	243 9703,0	+31,723436	+48,385103	+23,751844	68
243 9669,0	+58,361435	-17,769826	-12,653387	68	243 9703,5	+25,688437	+50,743497	+25,309754	68
243 9669,5	+60,602923	-12,164565	-9,848465	68	243 9704,0	+19,339280	+52,492724	+26,563529	68
243 9670,0	+62,124001	-6,418513	-6,928075	68	243 9704,5	+12,748402	+53,602518	+27,493338	68
243 9670,5	+62,915070	-0,599823	-3,927450	68	243 9705,0	+5,993370	+54,048670	+28,082278	68
243 9671,0	+62,973749	+5,224136	-0,881828	68	243 9705,5	-0,843435	+53,813927	+28,316874	68
243 9671,5	+62,304572	+10,987116	+2,173734	68	243 9706,0	-7,675456	+52,888800	+28,187523	68
243 9672,0	+60,918705	+16,624256	+5,204531	68	243 9706,5	-14,412725	+51,272342	+27,688965	68
243 9672,5	+58,833829	+22,072369	+8,176348	68	243 9707,0	-20,962961	+48,973045	+26,820791	68
243 9673,0	+56,073868	+27,270139	+11,055604	68	243 9707,5	-27,232846	+46,009395	+25,587829	68
243 9673,5	+52,669043	+32,158450	+13,809505	68	243 9708,0	-33,129622	+42,410530	+24,000563	68
243 9674,0	+48,655683	+36,680617	+16,406191	68	243 9708,5	-38,562862	+38,216420	+22,075313	68
243 9674,5	+44,076355	+40,782798	+18,814940	68	243 9709,0	-43,446483	+33,477959	+19,834398	68
243 9675,0	+38,979754	+44,414394	+21,006387	68	243 9709,5	-47,700713	+28,256505	+17,306005	68
243 9675,5	+33,420706	+47,528509	+22,952768	68	243 9710,0	-51,254234	+22,623240	+14,523941	68
243 9676,0	+27,460097	+50,082546	+24,628240	68	243 9710,5	-54,046093	+16,658025	+11,527146	68
243 9676,5	+21,164749	+52,038871	+26,009236	68	243 9711,0	-56,027376	+10,447933	+8,359002	68
243 9677,0	+14,607087	+53,365443	+27,074811	68	243 9711,5	-57,162606	+4,085501	+5,066490	68
243 9677,5	+7,864827	+54,036645	+27,807105	68	243 9712,0	-57,430781	-2,333211	+1,699201	68
243 9678,0	+1,020364	+54,034029	+28,191764	68	243 9712,5	-56,825842	-8,710721	-1,691730	68
243 9678,5	-5,839961	+53,347055	+28,218376	68	243 9713,0	-55,356816	-14,950225	-5,054732	68
243 9679,0	-12,626801	+51,973798	+27,880888	68	243 9713,5	-53,047406	-20,957593	-8,338879	68
243 9679,5	-19,248946	+49,921631	+27,178028	68	243 9714,0	-49,935359	-26,643307	-11,494939	68
243 9680,0	-25,614650	+47,207643	+26,113612	68	243 9714,5	-46,071310	-31,924080	-14,476296	68
243 9680,5	-31,633114	+43,858949	+24,696773	68	243 9715,0	-41,517480	-36,724321	-17,239789	68
243 9681,0	-37,216121	+39,912835	+22,942140	68	243 9715,5	-36,346184	-40,977285	-19,746399	68
243 9681,5	-42,279683	+35,416525	+20,869805	68	243 9716,0	-30,638203	-44,625986	-21,961825	68
243 9682,0	-46,745765	+30,426813	+18,505228	68	243 9716,5	-24,481050	-47,623823	-23,856889	68
243 9682,5	-50,543893	+25,009367	+15,878947	68	243 9717,0	-17,967325	-49,935019	-25,407869	68
243 9683,0	-53,612742	+19,237836	+13,026215	68	243 9717,5	-11,192959	-51,534762	-26,596667	68
243 9683,5	-55,901471	+13,192672	+9,986454	68	243 9718,0	-4,255613	-52,409247	-27,410901	68
243 9684,0	-57,370860	+6,959815	+6,802612	68	243 9718,5	+2,746924	-52,555396	-27,843858	68
243 9684,5	-57,994307	+0,629222	+3,520466	68	243 9719,0	+9,718206	-51,980612	-27,894438	68
243 9685,0	-57,758421	-5,706721	+0,187797	68	243 9719,5	+16,564517	-50,702152	-27,566891	68
243 9685,5	-56,663430	-11,954861	-3,146446	68	243 9720,0	+23,196139	-48,746574	-26,870598	68
243 9686,0	-54,723273	-18,022947	-6,433021	68	243 9720,5	+29,528493	-46,148981	-25,819721	68
243 9686,5	-51,965432	-23,821287	-9,623284	68	243 9721,0	+35,483114	-42,952122	-24,432793	68
243 9687,0	-48,430479	-29,264381	-12,670057	68	243 9721,5	+40,988464	-39,205500	-22,732282	68
243 9687,5	-44,171349	-34,272448	-15,528489	68	243 9722,0	+45,980652	-34,964440	-20,744134	68
243 9688,0	-39,252370	-38,772849	-18,156847	68	243 9722,5	+50,403857	-30,289028	-18,497237	68
243 9688,5	-33,748082	-42,701364	-20,517256	68	243 9723,0	+54,210718	-25,243158	-16,022947	68
243 9689,0	-27,741840	-46,003338	-22,576385	68	243 9723,5	+57,362397	-19,893508	-13,354526	68
243 9689,5	-21,324190	-48,634565	-24,305990	68	243 9724,0	+59,828775	-14,308689	-10,526732	68
243 9690,0	-14,591118	-50,561919	-25,683360	68	243 9724,5	+61,588159	-8,558308	-7,575276	68
243 9690,5	-7,642251	-51,763850	-26,691672	68	243 9725,0	+62,627210	-2,712221	-4,536458	68
243 9691,0	-0,578923	-52,230469	-27,320132	68	243 9725,5	+62,940551	+3,160177	-1,446733	68
243 9691,5	+6,497692	-51,963461	-27,564055	68	243 9726,0	+62,530548	+8,990558	+1,657592	68
243 9692,0	+13,488405	-50,975665	-27,424722	68	243 9726,5	+61,406801	+14,712188	+4,740675	68
243 9692,5	+20,297685	-49,290413	-26,909143	68	243 9727,0	+59,585867	+20,260366	+7,767382	68
243 9693,0	+26,835168	-46,940691	-26,029691	68	243 9727,5	+57,090824	+25,572779	+10,703508	68
243 9693,5	+33,016938	-43,968121	-24,803643	68	243 9728,0	+53,950991	+30,589838	+13,515961	68
243 9694,0	+38,766552	-40,421813	-23,252626	68	243 9728,5	+50,201555	+35,254925	+16,172917	68
243 9694,5	+44,015752	-36,357094	-21,401994	68	243 9729,0	+45,883394	+39,514669	+18,643978	68
243 9695,0	+48,705062	-31,834410	-19,280281	68	243 9729,5	+41,042818	+43,319171	+20,900313	68
243 9695,5	+52,783948	-26,918040	-16,918531	68	243 9730,0	+35,731389	+46,622252	+22,914786	68
243 9696,0	+56,210914	-21,675023	-14,349757	68	243 9730,5	+30,005871	+49,381805	+24,662157	68
					243 9731,0	+23,928032	+51,560087	+26,119239	68

J.D.	x	y	z	J.D.	x	y	z		
243 9731,5	+17,564583	+53,124121	+27,265131	68	243 9766,5	-56,378796	+1,518572	+3,563383	68
243 9732,0	+10,987066	+54,046238	+28,081499	68	243 9767,0	-56,091143	-5,006319	+0,065861	68
243 9732,5	+4,271642	+54,304597	+28,552875	68	243 9767,5	-54,901647	-11,451371	+3,433478	68
243 9733,0	-2,501179	+53,883915	+28,667045	68	243 9768,0	-52,823739	-17,710472	+6,877307	68
243 9733,5	-9,246951	+52,776103	+28,415427	68	243 9768,5	-49,888937	-23,680273	-10,208890	68
243 9734,0	-15,877893	+50,981174	+27,793580	68	243 9769,0	-46,146154	-29,263146	-13,373677	68
243 9734,5	-22,303676	+48,507912	+26,801592	68	243 9769,5	-41,660162	-34,369849	-16,320808	68
243 9735,0	-28,432560	+45,374848	+25,444657	68	243 9770,0	-36,509445	-38,921746	-19,004413	68
243 9735,5	-34,172702	+41,610819	+23,733456	68	243 9770,5	-30,783670	-42,852540	-21,384657	68
243 9736,0	-39,433848	+37,255548	+21,684523	68	243 9771,0	-24,580788	-46,109274	-23,428418	68
243 9736,5	-44,129294	+32,359988	+19,320550	68	243 9771,5	-18,004198	-48,652857	-25,109711	68
243 9737,0	-48,178044	+26,986222	+16,670427	68	243 9772,0	-11,159995	-50,457943	-26,409760	68
243 9737,5	-51,507125	+21,207021	+13,769132	68	243 9772,5	-4,154495	-51,512436	-27,316855	68
243 9738,0	-54,053930	+15,104926	+10,657362	68	243 9773,0	+2,907885	-51,816608	-27,825981	68
243 9738,5	-55,768394	+8,770814	+7,380861	68	243 9773,5	+9,926391	-51,382074	-27,938365	68
243 9739,0	-56,614835	+2,302021	+3,989545	68	243 9774,0	+16,805287	-50,230563	-27,660883	68
243 9739,5	-56,573497	+4,199895	+0,536367	68	243 9774,5	+23,454918	-48,392769	-27,005500	68
243 9740,0	-55,641301	-10,631697	-2,923983	68	243 9775,0	+29,792409	-45,907096	-25,988631	68
243 9740,5	-53,832176	-16,891084	-6,336467	68	243 9775,5	+35,742231	-42,818617	-24,630626	68
243 9741,0	-51,176527	-22,879281	-9,647075	68	243 9776,0	+41,236459	-39,177975	-22,955181	68
243 9741,5	-47,720275	-28,503424	-12,804167	68	243 9776,5	+46,214992	-35,040475	-20,988873	68
243 9742,0	-43,523286	-33,678611	-15,759629	68	243 9777,0	+50,625637	-30,465238	-18,760715	68
243 9742,5	-38,654745	-38,329581	-18,469861	68	243 9777,5	+54,424086	-25,514400	-16,301720	68
243 9743,0	-33,204617	-42,391886	-20,896512	68	243 9778,0	+57,573927	-20,252439	-13,644540	68
243 9743,5	-27,254177	-45,812732	-23,007040	68	243 9778,5	+60,046596	-14,745529	-10,823135	68
243 9744,0	-20,900998	-48,551280	-24,774980	68	243 9779,0	+61,821256	-9,060906	-7,872411	68
243 9744,5	-14,243250	-50,578673	-26,180072	68	243 9779,5	+62,884712	-3,266333	-4,827926	68
243 9745,0	-7,380496	-51,877813	-27,208230	68	243 9780,0	+63,231289	+2,570485	-1,725593	68
243 9745,5	-0,411946	-52,442820	-27,851358	68	243 9780,5	+62,862751	+8,382419	+1,398626	68
243 9746,0	+6,565029	-52,278462	-28,107105	68	243 9781,0	+61,787983	+14,103438	+4,508994	68
243 9746,5	+13,456199	-51,399331	-27,978501	68	243 9781,5	+60,022938	+19,669112	+7,570283	68
243 9747,0	+20,171576	-49,829148	-27,473653	68	243 9782,0	+57,590321	+25,017088	+10,548046	68
243 9747,5	+26,626303	-47,599803	-26,605262	68	243 9782,5	+54,519377	+30,087570	+13,408876	68
243 9748,0	+32,741446	-44,750609	-25,390282	68	243 9783,0	+50,845513	+34,823718	+16,120643	68
243 9748,5	+38,444589	-41,327382	-23,849452	68	243 9783,5	+46,610131	+39,172152	+18,652767	68
243 9749,0	+43,670361	-37,381642	-22,006911	68	243 9784,0	+41,860107	+43,083219	+20,976398	68
243 9749,5	+48,360837	-32,969762	-19,889745	68	243 9784,5	+36,647578	+46,511477	+23,064667	68
243 9750,0	+52,465778	-28,152111	-17,527568	68	243 9785,0	+31,029496	+49,415962	+24,892871	68
243 9750,5	+55,942980	-22,992341	-14,952144	68	243 9785,5	+25,067272	+51,760518	+26,438656	68
243 9751,0	+58,758213	-17,556491	-12,196907	68	243 9786,0	+18,826397	+53,514101	+27,682210	68
243 9751,5	+60,885415	-11,912303	-9,296621	68	243 9786,5	+12,376086	+54,651126	+28,606445	68
243 9752,0	+62,306613	-6,128453	-6,286950	68	243 9787,0	+5,788847	+55,151739	+29,197193	68
243 9752,5	+63,011739	-0,273847	-3,204091	68	243 9787,5	-0,859885	+55,002157	+29,443381	68
243 9753,0	+62,998554	+5,583013	-0,084402	68	243 9788,0	-7,492200	+54,194959	+29,337215	68
243 9753,5	+62,272280	+11,374650	+3,035904	68	243 9788,5	-14,028151	+52,729481	+28,874419	68
243 9754,0	+60,845506	+17,035181	+6,121103	68	243 9789,0	-20,386302	+50,612249	+28,054489	68
243 9754,5	+58,737629	+22,500769	+9,136219	68	243 9789,5	-26,484285	+47,857263	+26,880875	68
243 9755,0	+55,974736	+27,710135	+12,047291	68	243 9790,0	-32,239585	+44,486602	+25,361332	68
243 9755,5	+52,589110	+32,604909	+14,821591	68	243 9790,5	-37,570310	+40,530678	+23,508111	68
243 9756,0	+48,618923	+37,129983	+17,427842	68	243 9791,0	-42,396310	+36,028803	+21,338313	68
243 9756,5	+44,107903	+41,233847	+19,836390	68	243 9791,5	-46,640388	+31,029451	+18,874075	68
243 9757,0	+39,105004	+44,868821	+22,019367	68	243 9792,0	-50,229685	+25,590449	+16,142756	68
243 9757,5	+33,664150	+47,991403	+23,950880	68	243 9792,5	-53,097516	+19,779094	+13,177075	68
243 9758,0	+27,843933	+50,562450	+25,607135	68	243 9793,0	-55,185090	+13,671809	+10,015029	68
243 9758,5	+21,707428	+52,547591	+26,966646	68	243 9793,5	-56,443620	+7,353618	+6,699682	68
243 9759,0	+15,321902	+53,917419	+28,010375	68	243 9794,0	-56,836393	+0,917104	+3,278755	68
243 9759,5	+8,758620	+54,647921	+28,721955	68	243 9794,5	-56,340787	-5,539065	-0,196109	68
243 9760,0	+2,092606	+54,720850	+29,087914	68	243 9795,0	-54,949957	-11,912116	-3,670291	68
243 9760,5	-4,597651	+54,124317	+29,097995	68	243 9795,5	-52,674279	-18,097600	-7,087443	68
243 9761,0	-11,230563	+52,853138	+28,745363	68	243 9796,0	-49,542043	-23,992175	-10,390932	68
243 9761,5	-17,721915	+50,909643	+28,027074	68	243 9796,5	-45,599402	-29,496561	-13,525423	68
243 9762,0	-23,985494	+48,304204	+26,944368	68	243 9797,0	-40,909663	-34,518570	-16,438545	68
243 9762,5	-29,933887	+45,055940	+25,503110	68	243 9797,5	-35,551537	-38,975799	-19,082398	68
243 9763,0	-35,479563	+41,193432	+23,714203	68	243 9798,0	-29,616861	-42,797980	-21,414933	68
243 9763,5	-40,536181	+36,755277	+21,593970	68	243 9798,5	-23,207688	-45,928707	-23,401013	68
243 9764,0	-45,020175	+31,790532	+19,164450	68	243 9799,0	-16,433089	-48,326433	-25,013106	68
243 9764,5	-48,852709	+26,359003	+16,453662	68	243 9799,5	-9,405900	-49,964844	-26,231638	68
243 9765,0	-51,961739	+20,531096	+13,495626	68	243 9800,0	-2,239612	-50,832525	-27,044984	68
243 9765,5	-54,284374	+14,387340	+10,330220	68	243 9800,5	+4,954399	-50,932066	-27,449103	68
243 9766,0	-55,769269	+8,017408	+7,002781	68	243 9801,0	+12,069181	-50,278911	-27,447056	68

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z	J.D.	x	y	z		
243 9801,5	+19,004052	-48,899775	-27,048232	68	243 9836,5	+57,650962	+24,555760	+10,437784	68
243 9802,0	+25,665903	-46,831103	-26,267597	68	243 9837,0	+54,646507	+29,635940	+13,279702	68
243 9802,5	+31,970092	-44,117442	-25,124858	68	243 9837,5	+51,022689	+34,388022	+15,974475	68
243 9803,0	+37,840945	-40,809970	-23,643714	68	243 9838,0	+46,820783	+38,758886	+18,491862	68
243 9803,5	+43,211915	-36,965075	-21,851082	68	243 9838,5	+42,087756	+42,698962	+20,803266	68
243 9804,0	+48,025607	-32,643199	-19,776507	68	243 9839,0	+36,875894	+46,162479	+22,881878	68
243 9804,5	+52,233535	-27,907770	-17,451561	68	243 9839,5	+31,242717	+49,107951	+24,702971	68
243 9805,0	+55,795943	-22,824362	-14,909382	68	243 9840,0	+25,250660	+51,498656	+26,244137	68
243 9805,5	+58,681468	-17,459934	-12,184268	68	243 9840,5	+18,966751	+53,303064	+27,485548	68
243 9806,0	+60,866771	-11,882193	-9,311300	68	243 9841,0	+12,462164	+54,495302	+28,410228	68
243 9806,5	+62,336348	-6,159096	-6,326081	68	243 9841,5	+5,811745	+55,055703	+29,004350	68
243 9807,0	+63,082117	-0,358351	-3,264426	68	243 9842,0	-0,906589	+54,971185	+29,257483	68
243 9807,5	+63,103288	+5,452968	-0,162173	68	243 9842,5	-7,612554	+54,235709	+29,162862	68
243 9808,0	+62,406088	+11,208832	+2,945064	68	243 9843,0	-14,224260	+52,850662	+28,717622	68
243 9808,5	+61,003572	+16,844631	+6,022113	68	243 9843,5	-20,659085	+50,825099	+27,922974	68
243 9809,0	+58,915447	+22,297579	+9,034442	68	243 9844,0	-26,834607	+48,176015	+26,784377	68
243 9809,5	+56,167904	+27,507071	+11,948394	68	243 9844,5	-32,669598	+44,928457	+25,311657	68
243 9810,0	+52,793737	+32,415100	+14,731388	68	243 9845,0	-38,085070	+41,115557	+23,519056	68
243 9810,5	+48,830390	+36,966674	+17,352176	68	243 9845,5	-43,005324	+36,778432	+21,425234	68
243 9811,0	+44,323302	+41,110215	+19,781059	68	243 9846,0	-47,359088	+31,966062	+19,053242	68
243 9811,5	+39,322060	+44,798029	+21,990155	68	243 9846,5	-51,080580	+26,734944	+16,430397	68
243 9812,0	+33,881829	+47,986689	+23,953609	68	243 9847,0	-54,110695	+21,148750	+13,588132	68
243 9812,5	+28,062686	+50,637493	+25,647874	68	243 9847,5	-56,398033	+15,277763	+10,561755	68
243 9813,0	+21,929173	+52,716836	+27,051907	68	243 9848,0	-57,900046	+9,198240	+7,390152	68
243 9813,5	+15,549882	+54,196654	+28,147447	68	243 9848,5	-58,584123	+2,991640	+4,115407	68
243 9814,0	+8,996914	+55,054726	+28,919189	68	243 9849,0	-58,428610	-3,256342	+0,782352	68
243 9814,5	+2,345380	+55,275083	+29,355035	68	243 9849,5	-57,423730	-9,456892	-2,562016	68
243 9815,0	-4,327201	+54,848283	+29,446275	68	243 9850,0	-55,572450	-15,519368	-5,869168	68
243 9815,5	-10,941521	+53,771742	+29,187766	68	243 9850,5	-52,891122	-21,352776	-9,089819	68
243 9816,0	-17,417141	+52,049958	+28,578121	68	243 9851,0	-49,409966	-26,867436	-12,174792	68
243 9816,5	-23,673192	+49,694797	+27,619853	68	243 9851,5	-45,173213	-31,976795	-15,075979	68
243 9817,0	-29,629114	+46,725644	+26,319529	68	243 9852,0	-40,238897	-36,599349	-17,747389	68
243 9817,5	-35,205469	+43,169635	+24,687906	68	243 9852,5	-34,678255	-40,660635	-20,146221	68
243 9818,0	-40,324810	+39,061785	+22,740040	68	243 9853,0	-28,574614	-44,095138	-22,233943	68
243 9818,5	-44,912664	+34,445106	+20,495412	68	243 9853,5	-22,021826	-46,848035	-23,977288	68
243 9819,0	-48,898525	+29,370625	+17,977967	68	243 9854,0	-15,122310	-48,876777	-25,349179	68
243 9819,5	-52,217094	+23,897367	+15,216179	68	243 9854,5	-7,984631	-50,152122	-26,329383	68
243 9820,0	-54,809513	+18,092185	+12,242998	68	243 9855,0	-0,720902	-50,658919	-26,905041	68
243 9820,5	-56,624784	+12,029431	+9,095748	68	243 9855,5	+6,555997	-50,396149	-27,070824	68
243 9821,0	-57,621262	+5,790409	+5,815911	68	243 9856,0	+13,735116	-49,376686	-26,828886	68
243 9821,5	-57,768165	-0,537428	+2,448752	68	243 9856,5	+20,709958	-47,626364	-26,188516	68
243 9822,0	-57,047140	-6,861588	-0,957192	68	243 9857,0	+27,380672	-45,182804	-25,165563	68
243 9822,5	-55,453632	-13,085992	-4,350822	68	243 9857,5	+33,655852	-42,093879	-23,781733	68
243 9823,0	-52,998194	-19,112792	-7,679396	68	243 9858,0	+39,453815	-38,415956	-22,063669	68
243 9823,5	-49,707274	-24,844498	-10,889620	68	243 9858,5	+44,703483	-34,212157	-20,042091	68
243 9824,0	-45,623676	-30,186415	-13,928932	68	243 9859,0	+49,344796	-29,550646	-17,750876	68
243 9824,5	-40,806327	-35,049203	-16,746882	68	243 9859,5	+53,328744	-24,502989	-15,226198	68
243 9825,0	-35,329409	-39,351483	-19,296566	68	243 9860,0	+56,617097	-19,142742	-12,505747	68
243 9825,5	-29,280785	-43,022253	-21,535979	68	243 9860,5	+59,181966	-13,544230	-9,628080	68
243 9826,0	-22,759816	-46,003017	-23,429263	68	243 9861,0	+61,005236	-7,781569	-6,632051	68
243 9826,5	-15,874561	-48,249310	-24,947646	68	243 9861,5	+62,077834	-1,927816	-3,556337	68
243 9827,0	-8,738736	-49,731732	-26,070138	68	243 9862,0	+62,399067	+3,945608	-0,439101	68
243 9827,5	-1,464875	-50,436212	-26,783829	68	243 9862,5	+61,976001	+9,769396	+2,682303	68
243 9828,0	+5,820790	-50,363658	-27,083841	68	243 9863,0	+60,822885	+15,476716	+5,771530	68
243 9828,5	+13,017159	-49,529086	-26,972994	68	243 9863,5	+58,960586	+21,003445	+8,793417	68
243 9829,0	+20,014680	-47,960220	-26,461183	68	243 9864,0	+56,416192	+26,288395	+11,714101	68
243 9829,5	+26,715233	-45,695846	-25,564574	68	243 9864,5	+53,222653	+31,273471	+14,501139	68
243 9830,0	+33,029918	-42,784086	-24,304746	68	243 9865,0	+49,418499	+35,903861	+17,123614	68
243 9830,5	+38,879836	-39,280456	-22,707709	68	243 9865,5	+45,047586	+40,128188	+19,552229	68
243 9831,0	+44,196567	-35,246282	-20,803054	68	243 9866,0	+40,158983	+43,898784	+21,759464	68
243 9831,5	+48,922170	-30,747042	-18,623089	68	243 9866,5	+34,806750	+47,171905	+23,719702	68
243 9832,0	+53,008981	-25,851058	-16,202112	68	243 9867,0	+29,049855	+49,908110	+25,409433	68
243 9832,5	+56,419164	-20,628314	-13,575773	68	243 9867,5	+22,951954	+52,072596	+26,807443	68
243 9833,0	+59,124268	-15,149561	-10,780565	68	243 9868,0	+16,581192	+53,635691	+27,895100	68
243 9833,5	+61,104638	-9,485533	-7,853387	68	243 9868,5	+10,009897	+54,573278	+28,656570	68
243 9834,0	+62,348933	-3,706375	-4,831200	68	243 9869,0	+3,314212	+54,867429	+29,079208	68
243 9834,5	+62,853529	+2,118851	-1,750747	68	243 9869,5	-3,426453	+54,506819	+29,153757	68
243 9835,0	+62,622129	+7,922517	+1,351661	68	243 9870,0	-10,130034	+53,487411	+28,874775	68
243 9835,5	+61,665368	+13,638745	+4,440331	68	243 9870,5	-16,712614	+51,812863	+28,240881	68
243 9836,0	+60,000466	+19,203683	+7,480366	68	243 9871,0	-23,089367	+49,495024	+27,255036	68

J.D.	x	y	z	J.D.	x	y	z		
243 9871,5	-29,175632	+46,554266	+25,924790	68	243 9906,5	-40,644139	-36,897135	-18,446923	68
243 9872,0	-34,888152	+43,019755	+24,262454	68	243 9907,0	-35,289683	-41,019570	-20,850140	68
243 9872,5	-40,146334	+38,929427	+22,285155	68	243 9907,5	-29,409696	-44,528389	-22,941523	68
243 9873,0	-44,873671	+34,329969	+20,014867	68	243 9908,0	-23,092855	-47,375146	-24,691826	68
243 9873,5	-48,999123	+29,276435	+17,478260	68	243 9908,5	-16,433735	-49,522323	-26,077472	68
243 9874,0	-52,458563	+23,831804	+14,706534	68	243 9909,0	- 9,530991	-50,943656	-27,080810	68
243 9874,5	-55,195979	+18,066168	+11,735015	68	243 9909,5	- 2,485652	-51,624371	-27,690285	68
243 9875,0	-57,164828	+12,055934	+ 8,602786	68	243 9910,0	+ 4,600634	-51,561132	-27,900491	68
243 9875,5	-58,329063	+ 5,882701	+ 5,352120	68	243 9910,5	+11,627262	-50,761796	-27,712092	68
243 9876,0	-58,664007	- 0,367942	+ 2,027889	68	243 9911,0	+18,496288	-49,245051	-27,131688	68
243 9876,5	-58,157138	- 6,607726	- 1,323139	68	243 9911,5	+25,113907	-47,039732	-26,171493	68
243 9877,0	-56,808559	-12,747133	- 4,653020	68	243 9912,0	+31,391843	-44,184147	-24,849033	68
243 9877,5	-54,631269	-18,696863	- 7,913428	68	243 9912,5	+37,248593	-40,725148	-23,186681	68
243 9878,0	-51,651289	-24,369363	-11,056465	68	243 9913,0	+42,610453	-36,717105	-21,211142	68
243 9878,5	-47,907410	-29,680336	-14,035484	68	243 9913,5	+47,412371	-32,220778	-18,952872	68
243 9879,0	-43,450809	-34,550263	-16,805919	68	243 9914,0	+51,598637	-27,302160	-16,445493	68
243 9879,5	-38,344386	-38,905896	-19,326104	68	243 9914,5	+55,123253	-22,031224	-13,725114	68
243 9880,0	-32,661836	-42,681628	-21,558055	68	243 9915,0	+57,950206	-16,480765	-10,829726	68
243 9880,5	-26,486524	-45,820880	-23,468247	68	243 9915,5	+60,053431	-10,725183	- 7,798544	68
243 9881,0	-19,909991	-48,277142	-25,028250	68	243 9916,0	+61,416670	- 4,839417	- 4,671422	68
243 9881,5	-13,030386	-50,015093	-26,215359	68	243 9916,5	+62,033151	+ 1,102068	- 1,488299	68
243 9882,0	- 5,950541	-51,011207	-27,013025	68	243 9917,0	+61,905070	+ 7,026166	+ 1,711300	68
243 9882,5	+ 1,223967	-51,254323	-27,411223	68	243 9917,5	+61,043040	+12,861890	+ 4,888687	68
243 9883,0	+ 8,386963	-50,745730	-27,406572	68	243 9918,0	+59,465577	+18,541001	+ 8,006383	68
243 9883,5	+15,433764	-49,499013	-27,002349	68	243 9918,5	+57,198340	+23,998509	+11,028391	68
243 9884,0	+22,263258	-47,539602	-26,208321	68	243 9919,0	+54,273616	+29,173078	+13,920463	68
243 9884,5	+28,779785	-44,903848	-25,040313	68	243 9919,5	+50,729653	+34,007330	+16,650263	68
243 9885,0	+34,894847	-41,638030	-23,519756	68	243 9920,0	+46,610174	+38,448062	+19,187522	68
243 9885,5	+40,528476	-37,796989	-21,672998	68	243 9920,5	+41,963825	+42,446408	+21,504133	68
243 9886,0	+45,610340	-33,442722	-19,530598	68	243 9921,0	+36,843832	+45,958014	+23,574265	68
243 9886,5	+50,080413	-28,642820	-17,126509	68	243 9921,5	+31,307569	+48,943097	+25,374408	68
243 9887,0	+53,889380	-23,468967	-14,497296	68	243 9922,0	+25,416326	+51,366647	+26,883502	68
243 9887,5	+56,998689	-17,995496	-11,681360	68	243 9922,5	+19,235001	+53,198559	+28,082992	68
243 9888,0	+59,380366	-12,298047	- 8,718215	68	243 9923,0	+12,831913	+54,413795	+28,956970	68
243 9888,5	+61,016650	- 6,452421	- 5,647848	68	243 9923,5	+ 6,278585	+54,992767	+29,492338	68
243 9889,0	+61,899364	- 0,533545	- 2,510154	68	243 9924,0	- 0,350497	+54,921485	+29,678937	68
243 9889,5	+62,029302	+ 5,385331	+ 0,655519	68	243 9924,5	- 6,978135	+54,192111	+29,509843	68
243 9890,0	+61,415579	+11,233282	+ 3,810761	68	243 9925,0	-13,524771	+52,803309	+28,981570	68
243 9890,5	+60,074837	+16,942210	+ 6,918380	68	243 9925,5	-19,908962	+50,760848	+28,094403	68
243 9891,0	+58,030756	+22,447225	+ 9,942633	68	243 9926,0	-26,047953	+48,078069	+26,852696	68
243 9891,5	+55,313315	+27,686887	+12,849397	68	243 9926,5	-31,858499	+44,776520	+25,265227	68
243 9892,0	+51,958366	+32,603433	+15,606290	68	243 9927,0	-37,257825	+40,886464	+23,345500	68
243 9892,5	+48,007164	+37,142888	+18,182762	68	243 9927,5	-42,164890	+36,447350	+21,112063	68
243 9893,0	+43,506008	+41,255212	+20,550193	68	243 9928,0	-46,501862	+31,508135	+18,588715	68
243 9893,5	+38,506006	+44,894471	+22,681976	68	243 9928,5	-50,195754	+26,127355	+15,804607	68
243 9894,0	+33,062787	+48,018929	+24,553606	68	243 9929,0	-53,180400	+20,372986	+12,794246	68
243 9894,5	+27,236335	+50,591284	+26,142791	68	243 9929,5	-55,398267	+14,321843	+ 9,597206	68
243 9895,0	+21,090882	+52,578971	+27,429646	68	243 9930,0	-56,802607	+ 8,058720	+ 6,257759	68
243 9895,5	+14,694650	+53,954392	+28,396804	68	243 9930,5	-57,359155	+ 1,674983	+ 2,824174	68
243 9896,0	+ 8,119731	+54,695395	+29,029693	68	243 9931,0	-57,047794	- 4,733135	- 0,652176	68
243 9896,5	+ 1,441790	+54,785679	+29,316758	68	243 9931,5	-55,863741	-11,066629	- 4,117879	68
243 9897,0	- 5,260280	+54,215357	+29,249787	68	243 9932,0	-53,818235	-17,226055	- 7,518738	68
243 9897,5	-11,904822	+52,981499	+28,824223	68	243 9932,5	-50,938676	-23,113965	-10,801080	68
243 9898,0	-18,408080	+51,088771	+28,039511	68	243 9933,0	-47,268116	-28,637324	-13,913092	68
243 9898,5	-24,684980	+48,549932	+26,899426	68	243 9933,5	-42,864271	-33,709821	-16,806086	68
243 9899,0	-30,650184	+45,386466	+25,412425	68	243 9934,0	-37,797897	-38,253784	-19,435605	68
243 9899,5	-36,219267	+41,628925	+23,591889	68	243 9934,5	-32,150922	-42,201848	-21,762397	68
243 9900,0	-41,310158	+37,317248	+21,456343	68	243 9935,0	-26,014219	-45,498125	-23,753095	68
243 9900,5	-45,844722	+32,500836	+19,029546	68	243 9935,5	-19,485313	-48,098922	-25,380725	68
243 9901,0	-49,750387	+27,238310	+16,340437	68	243 9936,0	-12,666111	-49,973159	-26,624978	68
243 9901,5	-52,962002	+21,597130	+13,422969	68	243 9936,5	- 5,660642	-51,102281	-27,472251	68
243 9902,0	-55,423457	+15,652722	+10,315728	68	243 9937,0	+ 1,426932	-51,479921	-27,915537	68
243 9902,5	-57,089292	+ 9,487414	+ 7,061389	68	243 9937,5	+ 8,494168	-51,111426	-27,954237	68
243 9903,0	-57,926167	+ 3,189049	+ 3,706042	68	243 9938,0	+15,441910	-50,012981	-27,593715	68
243 9903,5	-57,913855	- 3,150641	+ 0,298341	68	243 9938,5	+22,175693	-48,210890	-26,844991	68
243 9904,0	-57,046088	- 9,437855	- 3,111442	68	243 9939,0	+28,606831	-45,740495	-25,724163	68
243 9904,5	-55,330883	-15,578617	- 6,472436	68	243 9939,5	+34,653427	-42,645296	-24,251997	68
243 9905,0	-52,790532	-21,480706	- 9,734186	68	243 9940,0	+40,241089	-38,975902	-22,453347	68
243 9905,5	-49,461133	-27,055499	-12,847691	68	243 9940,5	+45,303562	-34,789008	-20,356664	68
243 9906,0	-45,391935	-32,219756	-15,766368	68	243 9941,0	+49,783175	-30,146413	-17,993439	68

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z	J.D.	x	y	z
243 9941,5	+53,631167	-25,114009	-15,397696	243 9976,5	+26,536359	+51,289562	+26,866526
243 9942,0	+56,807862	-19,760798	-12,605453	243 9977,0	+20,417419	+53,294850	+28,154238
243 9942,5	+59,282795	-14,157969	-9,654230	243 9977,5	+14,076344	+54,703606	+29,126155
243 9943,0	+61,034653	-8,377961	-6,582535	243 9978,0	+7,583689	+55,497037	+29,769802
243 9943,5	+62,051179	-2,493603	-3,429399	243 9978,5	+1,012097	+55,662095	+30,075738
243 9944,0	+62,328905	+3,422731	-0,233913	243 9979,0	-5,564125	+55,191646	+30,037688
243 9944,5	+61,872821	+9,299884	+2,965205	243 9979,5	-12,069450	+54,084741	+29,652685
243 9945,0	+60,696025	+15,068610	+6,129991	243 9980,0	-18,427571	+52,346671	+28,921127
243 9945,5	+58,819256	+20,662215	+9,223607	243 9980,5	-24,561870	+49,989220	+27,846918
243 9946,0	+56,270316	+26,017077	+12,210630	243 9981,0	-30,395901	+47,030892	+26,437612
243 9946,5	+53,083634	+31,073142	+15,057350	243 9981,5	-35,854030	+43,497190	+24,704582
243 9947,0	+49,299687	+35,774316	+17,731993	243 9982,0	-40,862001	+39,420790	+22,663138
243 9947,5	+44,964392	+40,068741	+20,204894	243 9982,5	-45,347838	+34,841925	+20,332749
243 9948,0	+40,128691	+43,909130	+22,448695	243 9983,0	-49,242688	+29,808521	+17,737160
243 9948,5	+34,847973	+47,252907	+24,438445	243 9983,5	-52,481933	+24,376407	+14,904526
243 9949,0	+29,181658	+50,062437	+26,151723	243 9984,0	-55,006499	+18,609393	+11,867501
243 9949,5	+23,192745	+52,305130	+27,568730	243 9984,5	-56,764333	+12,579157	+8,663220
243 9950,0	+16,947450	+53,953575	+28,672363	243 9985,0	-57,711926	+6,364882	+5,333159
243 9950,5	+10,514855	+54,985761	+29,448353	243 9985,5	-57,816168	+0,052659	+1,922854
243 9951,0	+3,966594	+55,385148	+29,885305	243 9986,0	-57,056085	-6,265549	-1,518588
243 9951,5	-2,623465	+55,140980	+29,974883	243 9986,5	-55,424517	-12,493310	-4,939202
243 9952,0	-9,179520	+54,248417	+29,711907	243 9987,0	-52,929666	-18,531582	-8,285122
243 9952,5	-15,624172	+52,708908	+29,094537	243 9987,5	-49,596189	-24,280978	-11,501763
243 9953,0	-21,878838	+50,530558	+28,124515	243 9988,0	-45,465797	-29,644364	-14,535221
243 9953,5	-27,864229	+47,728495	+26,807368	243 9988,5	-40,597118	-34,529641	-17,333771
243 9954,0	-33,500950	+44,325317	+25,152659	243 9989,0	-35,064905	-38,852603	-19,849459
243 9954,5	-38,710288	+40,351547	+23,174295	243 9989,5	-28,958362	-42,539591	-22,039563
243 9955,0	-43,415142	+35,846082	+20,890758	243 9990,0	-22,378793	-45,529752	-23,867919
243 9955,5	-47,541230	+30,856576	+18,325385	243 9990,5	-15,436659	-47,776766	-25,305936
243 9956,0	-51,018413	+25,439638	+15,065500	243 9991,0	-8,248312	-49,249928	-26,333286
243 9956,5	-53,782442	+19,660988	+12,467569	243 9991,5	-0,932567	-49,934363	-26,938128
243 9957,0	-55,776681	+13,595158	+9,247088	243 9992,0	+6,392558	-49,830762	-27,117083
243 9957,5	-56,954121	+7,324988	+5,888381	243 9992,5	+13,612798	-48,954365	-26,874758
243 9958,0	-57,279419	+0,940649	+2,439137	243 9993,0	+20,620114	-47,333536	-26,223066
243 9958,5	-56,730777	-5,461790	-1,049296	243 9993,5	+27,314628	-45,008095	-25,180385
243 9959,0	-55,301644	-11,782242	-4,522877	243 9994,0	+33,605999	-42,027461	-23,770599
243 9959,5	-53,001904	-17,918882	-7,926079	243 9994,5	+39,414315	-38,448835	-22,022131
243 9960,0	-49,858693	-23,770791	-11,203279	243 9995,0	+44,670487	-34,335413	-19,967006
243 9960,5	-45,916318	-29,240721	-14,300270	243 9995,5	+49,316335	-29,754826	-17,639993
243 9961,0	-41,235538	-34,237888	-17,165803	243 9996,0	+53,304450	-24,777748	-15,077861
243 9961,5	-35,892107	-38,680555	-19,753026	243 9996,5	+56,597763	-19,476667	-12,318683
243 9962,0	-29,974688	-42,498274	-22,020776	243 9997,0	+59,169138	-13,924909	-9,401298
243 9962,5	-23,582175	-45,633508	-23,934554	243 9997,5	+61,000854	-8,195776	-6,364841
243 9963,0	-16,820872	-48,042820	-25,467246	243 9998,0	+62,084004	-2,361850	-3,248325
243 9963,5	-9,801431	-49,697262	-26,599454	243 9998,5	+62,418063	+3,505567	-0,090328
243 9964,0	-2,635987	-50,582293	-27,319549	243 9999,0	+62,010340	+9,336961	+3,071289
243 9964,5	+4,564475	-50,697223	-27,623434	243 9999,5	+60,875542	+15,065017	+6,199632
243 9965,0	+11,692406	-50,054230	-27,514124	244 0000,0	+59,035346	+20,624999	+9,258991
243 9965,5	+18,645586	-48,677125	-27,001103	244 0000,5	+56,517984	+25,955105	+12,215041
243 9966,0	+25,328569	-46,599983	-26,099661	244 0001,0	+53,357915	+30,996802	+15,035038
243 9966,5	+31,653777	-43,865777	-24,830166	244 0001,5	+49,595375	+35,695129	+17,687993
243 9967,0	+37,542250	-40,524968	-23,217346	244 0002,0	+45,276070	+39,999035	+20,144874
243 9967,5	+42,924079	-36,634154	-21,289559	244 0002,5	+40,450796	+43,861688	+22,378782
243 9968,0	+47,738672	-32,254890	-19,078152	244 0003,0	+35,174975	+47,240708	+24,365091
243 9968,5	+51,934795	-27,452548	-16,616871	244 0003,5	+29,508391	+50,098599	+26,081696
243 9969,0	+55,470536	-22,295322	-13,941296	244 0004,0	+23,514631	+52,402908	+27,509110
243 9969,5	+58,313184	-16,853338	-11,088356	244 0004,5	+17,260707	+54,126587	+28,630679
243 9970,0	+60,438989	-11,197813	-8,095878	244 0005,0	+10,816520	+55,248170	+29,432685
243 9970,5	+61,832931	-5,400325	-5,002168	244 0005,5	+4,254394	+55,752093	+29,904539
243 9971,0	+62,488457	+0,467852	-1,845650	244 0006,0	-2,351479	+55,628826	+30,038859
243 9971,5	+62,407197	+6,336382	+1,335494	244 0006,5	-8,925588	+54,875033	+29,831589
243 9972,0	+61,598584	+12,136455	+4,503652	244 0007,0	-15,391650	+53,493832	+29,282142
243 9972,5	+60,079577	+17,801326	+7,622076	244 0007,5	-21,673218	+51,949820	+28,393441
243 9973,0	+57,874220	+23,266813	+10,655177	244 0008,0	-27,694278	+48,894277	+27,172033
243 9973,5	+55,013262	+28,471779	+13,568804	244 0008,5	-33,379879	+45,715217	+25,628154
243 9974,0	+51,533706	+33,358527	+16,330455	244 0009,0	-38,656827	+41,987510	+23,775800
243 9974,5	+47,478467	+37,873258	+18,909557	244 0009,5	-43,454357	+37,747900	+21,632759
243 9975,0	+42,895778	+41,966362	+21,277638	244 0010,0	-47,704941	+33,040086	+19,220688
243 9975,5	+37,838809	+45,592766	+23,408518	244 0010,5	-51,345117	+27,914720	+16,565111
243 9976,0	+32,365154	+48,712226	+25,278509	244 0011,0	-54,316440	+22,429353	+13,695438

J.D.	x	y	z		J.D.	x	y	z	
244 0011,5	-56,566458	+16,648307	+10,644911	68	244 0036,5	-41,370149	+39,872670	+22,498778	69
244 0012,0	-58,049914	+10,642465	+7,450527	68	244 0037,0	-45,943847	+35,410422	+20,210925	69
244 0012,5	-58,729991	+4,488876	+4,152858	68	244 0037,5	-49,940791	+30,511774	+17,672755	69
244 0013,0	-58,579553	-1,729844	+0,795762	68	244 0038,0	-53,301674	+25,232001	+14,912656	69
244 0013,5	-57,582570	-7,926308	-2,574012	68	244 0038,5	-55,973304	+19,632667	+11,962566	69
244 0014,0	-55,735458	-14,009497	-5,907389	68	244 0039,0	-57,909592	+13,781276	+8,857821	69
244 0014,5	-53,048264	-19,886153	-9,153702	68	244 0039,5	-59,072473	+7,750737	+5,636882	69
244 0015,0	-49,545793	-25,462584	-12,261622	68	244 0040,0	-59,432912	+1,618786	+2,341052	69
244 0015,5	-45,268244	-30,646708	-15,180256	68	244 0040,5	-58,971824	-4,532785	-0,985929	69
244 0016,0	-40,271478	-35,350412	-17,860409	68	244 0041,0	-57,681056	-10,619005	-4,298330	69
244 0016,5	-34,626698	-39,492058	-20,255939	68	244 0041,5	-55,564219	-16,552813	-7,548999	69
244 0017,0	-28,419433	-42,999013	-22,325171	68	244 0042,0	-52,637518	-22,246340	-10,690037	69
244 0017,5	-21,747836	-45,809982	-24,032181	68	244 0042,5	-48,930259	-27,612330	-13,673557	69
244 0018,0	-14,720373	-47,877136	-25,348037	68	244 0043,0	-44,485366	-32,565848	-16,452586	69
244 0018,5	-7,452865	-49,167519	-26,251624	68	244 0043,5	-39,359372	-37,026061	-18,982045	69
244 0019,0	-0,065292	-49,664043	-26,730289	68	244 0044,0	-33,622177	-40,918240	-21,219831	69
244 0019,5	+7,321648	-49,365660	-26,780021	68	244 0044,5	-27,356278	-44,175740	-23,127900	69
244 0020,0	+14,589817	-48,286831	-26,405258	68	244 0045,0	-20,655536	-46,741961	-24,673364	69
244 0020,5	+21,626626	-46,456434	-25,618394	68	244 0045,5	-13,627418	-48,572180	-25,829524	69
244 0021,0	+28,327551	-43,916191	-24,438986	68	244 0046,0	-6,370742	-49,634992	-26,576706	69
244 0021,5	+34,598051	-40,718710	-22,892761	68	244 0046,5	+0,986937	-49,913419	-26,902913	69
244 0022,0	+40,354920	-36,925439	-21,010555	68	244 0047,0	+8,332254	-49,405455	-26,804210	69
244 0022,5	+45,526976	-32,604538	-18,827163	68	244 0047,5	+15,549045	-48,124079	-26,284788	69
244 0023,0	+50,055412	-27,828990	-16,380359	68	244 0048,0	+22,525266	-46,096617	-25,356698	69
244 0023,5	+53,893503	-22,674742	-13,709857	68	244 0048,5	+29,155684	-43,363644	-24,039320	69
244 0024,0	+57,006243	-17,219249	-10,856529	68	244 0049,0	+35,344128	-39,977393	-22,358564	69
244 0024,5	+59,369702	-11,540177	-7,861673	68	244 0049,5	+41,005272	-35,999897	-20,345894	69
244 0025,0	+60,970200	-5,714364	-4,766445	68	244 0050,0	+46,065815	-31,500928	-18,037268	69
244 0025,5	+61,803545	+0,182964	-1,611382	68	244 0050,5	+50,465174	-26,555943	-15,472016	69
244 0026,0	+61,874256	+6,078821	+1,563924	68	244 0051,0	+54,155584	-21,244063	-12,691776	69
244 0026,5	+61,194833	+11,902921	+4,721130	68	244 0051,5	+57,101922	-15,646315	-9,739517	69
244 0027,0	+59,785090	+17,588049	+7,823344	68	244 0052,0	+59,281069	-9,844031	-6,658675	69
244 0027,5	+57,671513	+23,070309	+10,835288	68	244 0052,5	+60,681192	-3,917576	-3,492445	69
244 0028,0	+54,886791	+28,289352	+13,723432	68	244 0053,0	+61,300720	+2,054716	-0,283169	69
244 0028,5	+51,469395	+33,188609	+16,456129	68	244 0053,5	+61,147589	+7,997315	+2,928095	69
244 0029,0	+47,463095	+37,715421	+19,003709	68	244 0054,0	+60,238089	+13,838077	+6,101912	69
244 0029,5	+42,916675	+41,821283	+21,338618	68	244 0054,5	+58,596163	+19,508674	+9,200729	69
244 0030,0	+37,883580	+45,462047	+23,435530	68	244 0055,0	+56,252524	+24,944858	+12,189033	69
244 0030,5	+32,421572	+48,598135	+25,271485	68	244 0055,5	+53,243985	+30,086648	+15,033483	69
244 0031,0	+26,592422	+51,194797	+26,826026	68	244 0056,0	+49,612821	+34,878427	+17,702958	69
244 0031,5	+20,461554	+53,222387	+28,081379	68	244 0056,5	+45,406315	+39,269055	+20,168655	69
244 0032,0	+14,097661	+54,656652	+29,022603	68	244 0057,0	+40,676346	+43,211977	+22,404144	69
244 0032,5	+7,572274	+55,479013	+29,637750	68	244 0057,5	+35,478955	+46,665241	+24,385397	69
244 0033,0	+0,959272	+55,676862	+29,918062	68	244 0058,0	+29,874100	+49,591717	+26,090903	69
244 0033,5	-5,665639	+55,243857	+29,858120	68	244 0058,5	+23,925341	+51,959196	+27,501751	69
244 0034,0	-12,225544	+54,180093	+29,455966	68	244 0059,0	+17,699548	+53,740631	+28,601752	69
244 0034,5	-18,642951	+52,492412	+28,713280	68	244 0059,5	+11,266588	+54,914317	+29,377544	69
244 0035,0	-24,840520	+50,194526	+27,635464	68	244 0060,0	+4,698997	+55,464252	+29,818813	69
244 0035,5	-30,741806	+47,307137	+26,231743	68	244 0060,5	-1,928429	+55,380361	+29,918406	69
244 0036,0	-36,272059	+43,857997	+24,515198	68	244 0061,0	-8,539103	+54,658883	+29,672557	69
244 0036,5	-41,359050	+39,881915	+22,502797	68	244 0061,5	-15,055214	+53,302616	+29,081045	69
244 0037,0	-45,933967	+35,420690	+20,215389	68	244 0062,0	-21,398371	+51,321289	+28,147398	69
244 0037,5	-49,932252	+30,522935	+17,677607	68	244 0062,5	-27,490352	+48,731780	+26,879026	69
244 0038,0	-53,294584	+25,243914	+14,917835	68	244 0063,0	-33,253931	+45,558283	+25,287342	69
244 0038,5	-55,967752	+19,645177	+11,968004	68	244 0063,5	-38,613855	+41,832520	+23,387885	69
244 0039,0	-57,905649	+13,794219	+8,863447	68	244 0064,0	-43,497802	+37,593663	+21,200313	69
244 0039,5	-59,070191	+7,763940	+5,642621	68	244 0064,5	-47,837471	+32,888290	+18,748380	69
244 0040,0	-59,432321	+1,632070	+2,346826	68	244 0065,0	-51,569690	+27,770140	+16,059858	69
244 0040,5	-58,972931	-4,519604	-0,980199	68	244 0065,5	-54,637473	+22,299713	+13,166310	69
244 0041,0	-57,683845	-10,606112	-4,292726	68	244 0066,0	-56,991140	+16,543785	+10,102877	69
244 0041,5	-55,568651	-16,540393	-7,543600	68	244 0066,5	-58,589364	+10,574738	+6,907913	69
244 0042,0	-52,643527	-22,234574	-10,684923	68	244 0067,0	-59,400124	+4,469761	+3,622592	69
244 0042,5	-48,937757	-27,601392	-13,668803	68	244 0067,5	-59,401528	-1,690091	+0,290401	69
Epoch 1969.0					244 0068,0	-58,582677	-7,820930	+3,043395	69
244 0034,0	-12,240515	+54,177359	+29,454777	69	244 0068,5	-56,944194	-13,837206	+6,332379	69
244 0034,5	-18,657473	+52,488244	+28,711467	69	244 0069,0	-54,498694	-19,652957	+9,529670	69
244 0035,0	-24,854424	+50,188972	+27,633050	69	244 0069,5	-51,271126	-25,183174	-12,588623	69
244 0035,5	-30,754927	+47,300265	+26,228755	69	244 0070,0	-47,298838	-30,345207	-15,463620	69
244 0036,0	-36,284242	+43,849888	+24,511674	69	244 0070,5	-42,631448	-35,060249	-18,110874	69
					244 0071,0	-37,330489	-39,254843	-20,489236	69

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z	J.D.	x	y	z		
244 0071.5	-31.468796	-42.862414	-22.561072	69	244 0106.5	+58.148316	-13.007835	-8.107772	69
244 0072.0	-25.129535	-45.824705	-24.293034	69	244 0107.0	+59.835438	-7.072039	-4.901346	69
244 0072.5	-18.405066	-48.093292	-25.656923	69	244 0107.5	+60.745637	-1.045816	-1.631479	69
244 0073.0	-11.395307	-49.630715	-26.630336	69	244 0108.0	+60.879434	+4.991244	+1.658403	69
244 0073.5	-4.205956	-50.411631	-27.197325	69	244 0108.5	+60.247471	+10.961946	+4.926002	69
244 0074.0	+3.053618	-50.423531	-27.348837	69	244 0109.0	+58.869540	+16.792403	+8.130640	69
244 0074.5	+10.272659	-49.667282	-27.083038	69	244 0109.5	+56.773798	+22.412723	+11.233662	69
244 0075.0	+17.341424	-48.157051	-26.405351	69	244 0110.0	+53.995879	+27.757606	+14.198790	69
244 0075.5	+24.153610	-45.920134	-25.328394	69	244 0110.5	+50.577894	+32.766669	+16.992292	69
244 0076.0	+30.608615	-42.996040	-23.871528	69	244 0111.0	+46.567710	+37.384775	+19.583196	69
244 0076.5	+36.613683	-39.435493	-22.060366	69	244 0111.5	+42.018074	+41.562116	+21.943345	69
244 0077.0	+42.085669	-35.298926	-19.925998	69	244 0112.0	+36.985998	+45.254315	+24.047471	69
244 0077.5	+46.952380	-30.654799	-17.504099	69	244 0112.5	+31.532181	+48.422491	+25.873233	69
244 0078.0	+51.153549	-25.577789	-14.833958	69	244 0113.0	+25.720426	+51.033171	+27.401185	69
244 0078.5	+54.641362	-20.146957	-11.957513	69	244 0113.5	+19.617277	+53.058331	+28.614813	69
244 0079.0	+57.380491	-14.443922	-8.918348	69	244 0114.0	+13.291629	+54.475397	+29.500523	69
244 0079.5	+59.347871	-8.551223	-5.760809	69	244 0114.5	+6.814458	+55.267328	+30.047710	69
244 0080.0	+60.532112	-2.550845	-2.529177	69	244 0115.0	+0.258495	+55.422675	+30.248797	69
244 0080.5	+60.932747	+3.477019	+0.733006	69	244 0115.5	-6.302029	+54.935716	+30.099301	69
244 0081.0	+60.559277	+9.454980	+3.983504	69	244 0116.0	-12.791684	+53.806706	+29.597988	69
244 0081.5	+59.430235	+15.309219	+7.181845	69	244 0116.5	-19.134183	+52.042097	+28.746993	69
244 0082.0	+57.572223	+20.970067	+10.289632	69	244 0117.0	-25.252822	+49.654880	+27.552020	69
244 0082.5	+55.018978	+26.372400	+13.270790	69	244 0117.5	-31.070990	+46.664871	+26.022506	69
244 0083.0	+51.810476	+31.455889	+16.091720	69	244 0118.0	-36.512876	+43.099147	+24.171863	69
244 0083.5	+47.992223	+36.165131	+18.721378	69	244 0118.5	-41.504216	+38.992267	+22.017634	69
244 0084.0	+43.614594	+40.449762	+21.131369	69	244 0119.0	-45.973356	+34.386634	+19.581687	69
244 0084.5	+38.732247	+44.264434	+23.295926	69	244 0119.5	-49.852336	+29.332602	+16.890306	69
244 0085.0	+33.403708	+47.568906	+25.191985	69	244 0120.0	-53.078287	+23.888549	+13.974259	69
244 0085.5	+27.690932	+50.328001	+26.799164	69	244 0120.5	-55.594793	+18.120615	+10.868665	69
244 0086.0	+21.659009	+52.511702	+28.099830	69	244 0121.0	-57.353524	+12.102331	+7.612835	69
244 0086.5	+15.375894	+54.095258	+29.079156	69	244 0121.5	-58.315744	+5.913857	+4.249865	69
244 0087.0	+8.912110	+55.059309	+29.725200	69	244 0122.0	-58.453834	-0.359056	+0.826120	69
244 0087.5	+2.340484	+55.390117	+30.029046	69	244 0122.5	-57.752624	-6.626416	+2.609506	69
244 0088.0	-4.264159	+55.079738	+29.984887	69	244 0123.0	-56.210493	-12.795631	+6.006453	69
244 0088.5	-10.825370	+54.126475	+29.590289	69	244 0123.5	-53.840135	-18.773411	+9.313517	69
244 0089.0	-17.265529	+52.535042	+28.846295	69	244 0124.0	-50.668785	-24.467778	-12.479958	69
244 0089.5	-23.506394	+50.317015	+27.757676	69	244 0124.5	-46.738137	-29.790175	-15.456648	69
244 0090.0	-29.469794	+47.491157	+26.333116	69	244 0125.0	-42.103716	-34.657533	-18.197211	69
244 0090.5	-35.078411	+44.083679	+24.585385	69	244 0125.5	-36.833719	-38.994142	-20.659066	69
244 0091.0	-40.256745	+40.128529	+22.531510	69	244 0126.0	-31.007584	-42.733318	-22.804360	69
244 0091.5	-44.932226	+35.667550	+20.192871	69	244 0126.5	-24.714211	-45.818800	-24.600779	69
244 0092.0	-49.036336	+30.750389	+17.595183	69	244 0127.0	-18.049980	-48.205793	-26.022126	69
244 0092.5	-52.505985	+25.344426	+14.768485	69	244 0127.5	-11.116574	-49.861538	-27.048701	69
244 0093.0	-55.284804	+19.784359	+11.746932	69	244 0128.0	-4.018913	-50.765757	-27.667565	69
244 0093.5	-57.324514	+13.871616	+8.568504	69	244 0128.5	+3.136966	-50.910630	-27.872564	69
244 0094.0	-58.586177	+7.773557	+5.274589	69	244 0129.0	+10.245867	-50.300454	-27.664184	69
244 0094.5	-59.041417	+1.572420	+1.909442	69	244 0129.5	+17.205271	-48.951258	-27.049371	69
244 0095.0	-58.673399	-4.645904	+1.480465	69	244 0130.0	+23.916963	-46.889984	-26.041113	69
244 0095.5	-57.477600	-10.793289	+4.847220	69	244 0130.5	+30.288505	-44.153748	-24.658061	69
244 0096.0	-55.462316	-16.780918	+8.142280	69	244 0131.0	+36.234480	-40.788795	-22.923982	69
244 0096.5	-52.648942	-22.520890	-11.317348	69	244 0131.5	+41.677538	-36.849427	-20.867189	69
244 0097.0	-49.071770	-27.927848	-14.325280	69	244 0132.0	+46.549328	-32.396958	-18.519981	69
244 0097.5	-44.777782	-32.920651	-17.120978	69	244 0132.5	+50.791125	-27.498456	-15.917979	69
244 0098.0	-39.825792	-37.423840	-19.662221	69	244 0133.0	+54.354352	-22.225571	-13.099494	69
244 0098.5	-34.285669	-41.369163	-21.910503	69	244 0133.5	+57.200864	-16.653319	-10.104845	69
244 0099.0	-28.237067	-44.696790	-23.831731	69	244 0134.0	+59.303138	-10.858897	-6.975745	69
244 0099.5	-21.768128	-47.356533	-25.396898	69	244 0134.5	+60.644141	-4.920488	-3.754623	69
244 0100.0	-14.973864	-49.308662	-26.582575	69	244 0135.0	+61.217194	+1.083831	+0.484038	69
244 0100.5	-7.954528	-50.524770	-27.371404	69	244 0135.5	+61.025544	+7.077141	+2.793905	69
244 0101.0	-0.813794	-50.988145	-27.752342	69	244 0136.0	+60.081932	+12.984634	+6.038101	69
244 0101.5	+6.343103	-50.694135	-27.720889	69	244 0136.5	+58.407893	+18.734442	+9.208891	69
244 0102.0	+13.411267	-49.650167	-27.279137	69	244 0137.0	+56.033134	+24.258394	+12.268497	69
244 0102.5	+20.288015	-47.875477	-26.435661	69	244 0137.5	+52.994755	+29.492603	+15.181349	69
244 0103.0	+26.874735	-45.400675	-25.205310	69	244 0138.0	+49.336406	+34.377932	+17.914373	69
244 0103.5	+33.078609	-42.267044	-23.608870	69	244 0138.5	+45.107570	+38.860390	+20.437194	69
244 0104.0	+38.814227	-38.525590	-21.672562	69	244 0139.0	+40.362778	+42.891393	+22.722311	69
244 0104.5	+44.004903	-34.235824	-19.427407	69	244 0139.5	+35.160861	+46.427924	+24.745194	69
244 0105.0	+48.583918	-29.464572	-16.908607	69	244 0140.0	+29.564252	+44.432598	+26.484323	69
244 0105.5	+52.495313	-24.284434	-14.154710	69	244 0140.5	+23.638458	+51.873791	+27.921281	69
244 0106.0	+55.694455	-18.772293	-11.206817	69	244 0141.0	+17.451444	+53.725572	+29.040718	69

J.D.	x	y	z	J.D.	x	y	z		
244 0141,5	+11,073164	+54,967676	+29,830363	69	244 0176,5	-58,969983	+4,041285	+3,115126	69
244 0142,0	+4,575185	+55,585570	+30,281033	69	244 0177,0	-58,655284	-2,160727	-0,262440	69
244 0142,5	-1,969708	+55,570445	+30,386668	69	244 0177,5	-57,500212	-8,337375	-3,638686	69
244 0143,0	-8,487849	+54,919207	+30,144316	69	244 0178,0	-55,501513	-14,397534	-6,964032	69
244 0143,5	-14,904990	+53,634597	+29,554203	69	244 0178,5	-52,669875	-20,247487	-10,187288	69
244 0144,0	-21,146664	+51,725371	+28,619845	69	244 0179,0	-49,031043	-25,792798	-13,256664	69
244 0144,5	-27,138484	+49,206370	+27,348080	69	244 0179,5	-44,626630	-30,940578	-16,120989	69
244 0145,0	-32,806619	+46,098864	+25,749274	69	244 0180,0	-39,514375	-35,602040	-18,731091	69
244 0145,5	-38,078286	+42,430785	+23,837445	69	244 0180,5	-33,767624	-39,695142	-21,041254	69
244 0146,0	-42,882374	+38,236986	+21,630433	69	244 0181,0	-27,474214	-43,147298	-23,010704	69
244 0146,5	-47,150228	+33,559552	+19,150057	69	244 0181,5	-20,734471	-45,897751	-24,604931	69
244 0147,0	-50,816582	+28,448024	+16,422278	69	244 0182,0	-13,658666	-47,899650	-25,796850	69
244 0147,5	-53,820693	+22,959575	+13,477298	69	244 0182,5	-6,363843	-49,121344	-26,567564	69
244 0148,0	-56,107659	+17,159003	+10,349585	69	244 0183,0	+1,029493	-49,547219	-26,906851	69
244 0148,5	-57,629857	+11,118560	+7,077798	69	244 0183,5	+8,400819	-49,177640	-26,813193	69
244 0149,0	-58,348547	+4,917493	+3,704570	69	244 0184,0	+15,632795	-48,028259	-26,293446	69
244 0149,5	-58,235615	-1,358709	+0,276121	69	244 0184,5	+22,614082	-46,128833	-25,362230	69
244 0150,0	-57,275060	-7,619443	+3,158335	69	244 0185,0	+29,241648	-43,521565	-24,041066	69
244 0150,5	-55,464626	-13,770523	-6,547396	69	244 0185,5	+35,422488	-40,259228	-22,357376	69
244 0151,0	-52,816889	-19,716059	-9,838482	69	244 0186,0	+41,074820	-36,403202	-20,343435	69
244 0151,5	-49,360090	-25,360667	-12,979026	69	244 0186,5	+46,128705	-32,021508	-18,035303	69
244 0152,0	-45,138335	-30,611900	-15,917802	69	244 0187,0	+50,526269	-27,187000	-15,471840	69
244 0152,5	-40,211224	-35,382765	-18,606301	69	244 0187,5	+54,221584	-21,975724	-12,693822	69
244 0153,0	-34,652775	-39,594159	-21,000076	69	244 0188,0	+57,180329	-16,465504	-9,743148	69
244 0153,5	-28,549791	-43,177103	-23,060010	69	244 0188,5	+59,379195	-10,734705	-6,662168	69
244 0154,0	-21,999624	-46,074511	-24,753288	69	244 0189,0	+60,805344	-4,861224	-3,493126	69
244 0154,5	-15,107637	-48,242641	-26,054256	69	244 0189,5	+61,455723	+1,078351	-0,277687	69
244 0155,0	-7,984367	-49,651757	-26,944827	69	244 0190,0	+61,336354	+7,009450	+2,943470	69
244 0155,5	-0,742731	-50,286481	-27,414711	69	244 0190,5	+60,461730	+12,860099	+6,130945	69
244 0156,0	+6,504684	-50,145504	-27,461316	69	244 0191,0	+58,854174	+18,561410	+9,246934	69
244 0156,5	+13,648082	-49,240866	-27,089389	69	244 0191,5	+56,543240	+24,048002	+12,255441	69
244 0157,0	+20,582574	-47,596994	-26,310523	69	244 0192,0	+53,565130	+29,258358	+15,122492	69
244 0157,5	+27,209909	-45,249373	-25,142465	69	244 0192,5	+49,962200	+34,135175	+17,816339	69
244 0158,0	+33,439875	-42,243299	-23,608451	69	244 0193,0	+45,782398	+38,625672	+20,307621	69
244 0158,5	+39,191267	-38,632307	-21,736375	69	244 0193,5	+41,078715	+42,681847	+22,569526	69
244 0159,0	+44,392627	-34,476863	-19,558067	69	244 0194,0	+35,908720	+46,260772	+24,577948	69
244 0159,5	+48,982648	-29,842960	-17,108554	69	244 0194,5	+30,333939	+49,324770	+26,311600	69
244 0160,0	+52,910384	-24,800837	-14,425350	69	244 0195,0	+24,419422	+51,841706	+27,752181	69
244 0160,5	+56,135310	-19,423796	-11,547810	69	244 0195,5	+18,233082	+53,785066	+28,884413	69
244 0161,0	+58,627228	-13,787097	-8,516531	69	244 0196,0	+11,845222	+55,134199	+29,696201	69
244 0161,5	+60,365973	-7,966925	-5,372787	69	244 0196,5	+5,327927	+55,874389	+30,178654	69
244 0162,0	+61,341249	-2,039512	-2,158027	69	244 0197,0	-1,245491	+55,996910	+30,326151	69
244 0162,5	+61,552206	+3,919752	+1,086604	69	244 0197,5	-7,801055	+55,499162	+30,136391	69
244 0163,0	+61,006992	+9,837082	+4,320682	69	244 0198,0	-14,264673	+54,384619	+29,610393	69
244 0163,5	+59,722326	+15,641001	+7,504924	69	244 0198,5	-20,562688	+52,662837	+28,752501	69
244 0164,0	+57,722997	+21,263000	+10,601531	69	244 0199,0	-26,622413	+50,349473	+27,570396	69
244 0164,5	+55,041256	+26,638126	+13,574532	69	244 0199,5	-32,372635	+47,466184	+26,075051	69
244 0165,0	+51,716234	+31,705484	+16,390061	69	244 0200,0	-37,744196	+44,040708	+24,280778	69
244 0165,5	+47,793342	+36,408710	+19,016630	69	244 0200,5	-42,670467	+40,106682	+22,205136	69
244 0166,0	+43,323565	+40,696327	+21,425344	69	244 0201,0	-47,087939	+35,703704	+19,868966	69
244 0166,5	+38,362857	+44,522085	+23,590074	69	244 0201,5	-50,936807	+30,877242	+17,296345	69
244 0167,0	+32,971434	+47,845181	+25,487607	69	244 0202,0	-54,161565	+25,678558	+14,514555	69
244 0167,5	+27,213177	+50,630494	+27,097779	69	244 0202,5	-56,711764	+20,164682	+11,554077	69
244 0168,0	+21,154946	+52,848644	+28,403521	69	244 0203,0	-58,542733	+14,398251	+8,448498	69
244 0168,5	+14,866007	+54,476085	+29,390912	69	244 0203,5	-59,616496	+8,447368	+5,234454	69
244 0169,0	+8,417487	+55,495237	+30,049257	69	244 0204,0	-59,902681	+2,385303	+1,951470	69
244 0169,5	+1,881808	+55,894371	+30,371051	69	244 0204,5	-59,379716	-3,709884	-1,358232	69
244 0170,0	-4,667764	+55,667637	+30,351978	69	244 0205,0	-58,035837	-9,755950	-4,650066	69
244 0170,5	-11,157586	+54,815143	+29,990980	69	244 0205,5	-55,870362	-15,667286	-7,877492	69
244 0171,0	-17,514059	+53,342824	+29,290180	69	244 0206,0	-52,894870	-21,355994	-10,992612	69
244 0171,5	-23,664025	+51,262589	+28,254974	69	244 0206,5	-49,134280	-26,733310	-13,946927	69
244 0172,0	-29,535178	+48,592284	+26,894013	69	244 0207,0	-44,627705	-31,711297	-16,692243	69
244 0172,5	-35,056493	+45,355824	+25,219277	69	244 0207,5	-39,429030	-36,204907	-19,181802	69
244 0173,0	-40,158669	+41,583248	+23,246116	69	244 0208,0	-33,607035	-40,134312	-21,371528	69
244 0173,5	-44,774645	+37,310885	+20,993340	69	244 0208,5	-27,244825	-43,427315	-23,221361	69
244 0174,0	-48,840265	+32,581532	+18,483332	69	244 0209,0	-20,438703	-46,021878	-24,696628	69
244 0174,5	-52,294902	+27,444516	+15,742085	69	244 0209,5	-13,296254	-47,868448	-25,769330	69
244 0175,0	-55,082450	+21,955902	+12,799323	69	244 0210,0	-5,933754	-48,931905	-26,419225	69
244 0175,5	-57,152184	+16,178453	+9,688509	69	244 0210,5	+1,526959	-49,192970	-26,634626	69
244 0176,0	-58,460061	+10,181620	+6,446840	69	244 0211,0	+8,961979	-48,648933	-26,412836	69

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z	J.D.	x	y	z		
244 0211,5	+16,248938	-47,313626	-25,760156	69	244 0246,5	+53,191227	+28,157777	+15,120914	69
244 0212,0	+23,270448	-45,216613	-24,691498	69	244 0247,0	+49,751688	+33,170337	+17,860132	69
244 0212,5	+29,917158	-42,401769	-23,229623	69	244 0247,5	+45,714340	+37,785060	+20,385110	69
244 0213,0	+36,090236	-38,925325	-21,404115	69	244 0248,0	+41,134833	+41,954140	+22,669518	69
244 0213,5	+41,703148	-34,853588	-19,250164	69	244 0248,5	+36,072555	+45,635364	+24,690065	69
244 0214,0	+46,682836	-30,260627	-16,807303	69	244 0249,0	+30,590167	+48,792112	+26,426498	69
244 0214,5	+50,970120	-25,225862	-14,118130	69	244 0249,5	+24,753083	+51,393254	+27,861540	69
244 0215,0	+54,519662	-19,831965	-11,227140	69	244 0250,0	+18,629113	+53,413129	+28,980905	69
244 0215,5	+57,299491	-14,162961	-8,179701	69	244 0250,5	+12,288144	+54,831703	+29,773365	69
244 0216,0	+59,290185	-8,302611	-5,021170	69	244 0251,0	+5,801754	+55,634494	+30,230722	69
244 0216,5	+60,483884	-2,333150	-1,796186	69	244 0251,5	-0,757132	+55,812770	+30,347919	69
244 0217,0	+60,883341	+3,665708	+1,451878	69	244 0252,0	-7,314624	+55,363704	+30,123125	69
244 0217,5	+60,500782	+9,617534	+4,681346	69	244 0252,5	-13,796339	+54,290430	+29,557767	69
244 0218,0	+59,356966	+15,449704	+7,852529	69	244 0253,0	-20,127865	+52,602288	+28,656669	69
244 0218,5	+57,480274	+21,093808	+10,927950	69	244 0253,5	-26,235342	+50,314918	+27,428102	69
244 0219,0	+54,905876	+26,485912	+13,872518	69	244 0254,0	-32,046101	+47,450435	+25,883887	69
244 0219,5	+51,674949	+31,566712	+16,653598	69	244 0254,5	-37,489346	+44,037426	+24,039381	69
244 0220,0	+47,834164	+36,281744	+19,241137	69	244 0255,0	-42,496940	+40,110119	+21,913539	69
244 0220,5	+43,434981	+40,581402	+21,607705	69	244 0255,5	-47,004203	+35,712796	+19,528859	69
244 0221,0	+38,533252	+44,421144	+23,728576	69	244 0256,0	-50,950746	+30,890616	+16,911281	69
244 0221,5	+33,188725	+47,761545	+25,581790	69	244 0256,5	-54,281389	+25,698409	+14,090088	69
244 0222,0	+27,464587	+50,568437	+27,148221	69	244 0257,0	-56,947048	+20,195820	+11,097705	69
244 0222,5	+21,427076	+52,813052	+28,411670	69	244 0257,5	-58,905494	+14,447683	+7,969419	69
244 0223,0	+15,145010	+54,472145	+29,358924	69	244 0258,0	-60,122290	+8,523516	+4,743101	69
244 0223,5	+8,689394	+55,528212	+29,979899	69	244 0258,5	-60,571522	+2,496826	+1,458832	69
244 0224,0	+2,132881	+55,969553	+30,267648	69	244 0259,0	-60,236481	-3,555679	-1,841528	69
244 0224,5	-4,450687	+55,790490	+30,218518	69	244 0259,5	-59,110255	-9,554925	-5,114802	69
244 0225,0	-10,986855	+54,991481	+29,832190	69	244 0260,0	-57,196339	-15,420447	-8,317017	69
244 0225,5	-17,401099	+53,579151	+29,111720	69	244 0260,5	-54,508957	-21,071393	-11,403963	69
244 0226,0	-23,619464	+51,566504	+28,063636	69	244 0261,0	-51,073438	-26,427653	-14,331803	69
244 0226,5	-29,569172	+48,972774	+26,697891	69	244 0261,5	-46,926301	-31,411007	-17,057702	69
244 0227,0	-35,179311	+45,823557	+25,027910	69	244 0262,0	-42,115400	-35,946439	-19,540556	69
244 0227,5	-40,381466	+42,150650	+23,070525	69	244 0262,5	-36,699618	-39,963382	-21,741660	69
244 0228,0	-45,110442	+37,991993	+20,845949	69	244 0263,0	-30,748612	-43,397117	-23,625475	69
244 0228,5	-49,304909	+33,391475	+18,377659	69	244 0263,5	-24,342155	-46,190161	-25,160405	69
244 0229,0	-52,908153	+28,398772	+15,692319	69	244 0264,0	-17,569307	-48,293645	-26,319539	69
244 0229,5	-55,868734	+23,069056	+12,819627	69	244 0264,5	-10,527252	-49,668732	-27,081425	69
244 0230,0	-58,141198	+17,462698	+9,792165	69	244 0265,0	-3,319767	-50,287757	-27,430715	69
244 0230,5	-59,686806	+11,644921	+6,645191	69	244 0265,5	+3,944534	-50,153453	-27,358818	69
244 0231,0	-60,474184	+5,685368	+3,416427	69	244 0266,0	+11,154334	-49,209551	-26,864280	69
244 0231,5	-60,480214	-0,342361	+0,145808	69	244 0266,5	+18,197975	-47,521614	-25,953150	69
244 0232,0	-59,690575	-6,361299	-3,124853	69	244 0267,0	+24,965963	-45,096795	-24,638964	69
244 0232,5	-58,100732	-12,291788	-6,352210	69	244 0267,5	+31,353575	-41,973697	-22,942602	69
244 0233,0	-55,716499	-18,052280	-9,491836	69	244 0268,0	+37,263340	-38,203469	-20,891822	69
244 0233,5	-52,554884	-23,560321	-12,498743	69	244 0268,5	+42,607334	-33,848539	-18,520570	69
244 0234,0	-48,644704	-28,733688	-15,328003	69	244 0269,0	+47,309077	-28,980939	-15,868069	69
244 0234,5	-44,027090	-33,491734	-17,935474	69	244 0269,5	+51,305072	-23,680407	-12,977780	69
244 0235,0	-38,755804	-37,756886	-20,278630	69	244 0270,0	+54,545670	-18,032169	-9,896198	69
244 0235,5	-32,897391	-41,456460	-22,317532	69	244 0270,5	+56,995523	-12,124806	-6,671680	69
244 0236,0	-26,530770	-44,524442	-24,015806	69	244 0271,0	+58,633434	-6,048133	-3,353296	69
244 0236,5	-19,746543	-46,903524	-25,341771	69	244 0271,5	+59,451882	+0,108708	+0,010234	69
244 0237,0	-12,645735	-48,547036	-26,269478	69	244 0272,0	+59,455978	+6,258934	+3,371442	69
244 0237,5	-5,337964	-49,420753	-26,779713	69	244 0272,5	+58,662440	+12,319477	+6,684868	69
244 0238,0	+2,060876	-49,504461	-26,860859	69	244 0273,0	+57,098254	+18,212054	+9,907649	69
244 0238,5	+9,431417	-48,792994	-26,509473	69	244 0273,5	+54,799281	+23,863910	+12,999918	69
244 0239,0	+16,653937	-47,296876	-25,730659	69	244 0274,0	+51,809026	+29,208339	+15,925103	69
244 0239,5	+23,611626	-45,042174	-24,537991	69	244 0274,5	+48,177357	+34,184932	+18,650070	69
244 0240,0	+30,193744	-42,069707	-22,953118	69	244 0275,0	+43,959429	+38,739703	+21,145174	69
244 0240,5	+36,298542	-38,433787	-21,005079	69	244 0275,5	+39,214727	+42,825073	+23,384270	69
244 0241,0	+41,835629	-34,200218	-18,729228	69	244 0276,0	+34,006234	+46,399746	+25,344653	69
244 0241,5	+46,727785	-29,444121	-16,166069	69	244 0276,5	+28,399748	+49,428579	+27,006970	69
244 0242,0	+50,912097	-24,247493	-13,359921	69	244 0277,0	+22,463341	+51,882443	+28,355154	69
244 0242,5	+54,340380	-18,696784	-10,357609	69	244 0277,5	+16,266904	+53,738093	+29,376361	69
244 0243,0	+56,979095	-12,880605	-7,207217	69	244 0278,0	+9,881748	+54,978062	+30,060910	69
244 0243,5	+58,808707	-6,887695	-3,956969	69	244 0278,5	+3,380279	+55,590557	+30,402220	69
244 0244,0	+59,822726	-0,805197	-0,654304	69	244 0279,0	-3,164307	+55,569532	+30,396868	69
244 0244,5	+60,026523	+5,282686	+2,654892	69	244 0279,5	-9,678314	+54,914687	+30,044569	69
244 0245,0	+59,436092	+11,295760	+5,926841	69	244 0280,0	-16,087883	+53,631533	+29,348230	69
244 0245,5	+58,076679	+17,158551	+9,120301	69	244 0280,5	-22,319368	+51,731617	+28,314070	69
244 0246,0	+55,981621	+22,800804	+12,196817	69	244 0281,0	-28,299795	+49,232602	+26,951654	69

J.D.	x	y	z	J.D.	x	y	z		
244 0281,5	-33,957344	+46,158438	+25,274007	69	244 0316,5	-41,697122	-35,379960	-19,351448	69
244 0282,0	-39,222025	+42,539575	+23,297707	69	244 0317,0	-36,287439	-39,561296	-21,642917	69
244 0282,5	-44,026379	+38,413027	+21,042952	69	244 0317,5	-30,342882	-43,151034	-23,610445	69
244 0283,0	-48,306290	+33,822429	+18,533563	69	244 0318,0	-23,949708	-46,092193	-25,222831	69
244 0283,5	-52,001946	+28,818032	+15,796994	69	244 0318,5	-17,202315	-48,338359	-26,454651	69
244 0284,0	-55,058797	+23,456508	+12,864226	69	244 0319,0	-10,201372	-49,854711	-27,286838	69
244 0284,5	-57,428613	+17,800653	+ 9,769613	69	244 0319,5	- 3,051716	-50,618580	-27,706989	69
244 0285,0	-59,070611	+11,918962	+ 6,550631	69	244 0320,0	+ 4,139715	-50,619798	-27,709540	69
244 0285,5	-59,952415	+ 5,884940	+ 3,247521	69	244 0320,5	+11,265977	-49,860717	-27,295795	69
244 0286,0	-60,051115	- 0,223683	- 0,097158	69	244 0321,0	+18,222091	-48,355879	-26,473732	69
244 0286,5	-59,354123	- 6,325958	- 3,439059	69	244 0321,5	+24,906923	-46,131560	-25,257760	69
244 0287,0	-57,859909	-12,338863	- 6,732695	69	244 0322,0	+31,224870	-43,224980	-23,668283	69
244 0287,5	-55,578452	-18,178568	- 9,932125	69	244 0322,5	+37,087362	-39,683390	-21,731193	69
244 0288,0	-52,531650	-23,761835	-12,991717	69	244 0323,0	+42,414184	-35,563027	-19,477314	69
244 0288,5	-48,753320	-29,007431	-15,866931	69	244 0323,5	+47,134580	-30,927942	-16,941737	69
244 0289,0	-44,289029	-33,837598	-18,515112	69	244 0324,0	+51,188146	-25,848712	-14,163128	69
244 0289,5	-39,195634	-38,179469	-20,896290	69	244 0324,5	+54,525448	-20,401116	-11,183001	69
244 0290,0	-33,540580	-41,966448	-22,973905	69	244 0325,0	+57,108602	-14,664801	- 8,044982	69
244 0290,5	-27,401008	-45,139502	-24,715546	69	244 0325,5	+58,911319	- 8,721852	- 4,794028	69
244 0291,0	-20,862621	-47,648319	-26,093571	69	244 0326,0	+59,919125	- 2,655467	-1,475705	69
244 0291,5	-14,018377	-49,452398	-27,085704	69	244 0326,5	+60,128973	+ 3,451388	+ 1,864565	69
244 0292,0	- 6,966972	-50,521816	-27,675472	69	244 0327,0	+59,548941	+ 9,517216	+ 5,182162	69
244 0292,5	+ 0,188754	-50,838037	-27,852634	69	244 0327,5	+58,197653	+15,463159	+ 8,433921	69
244 0293,0	+ 7,343598	-50,394319	-27,613418	69	244 0328,0	+56,103462	+21,214029	+11,578693	69
244 0293,5	+14,391845	-49,196075	-26,960707	69	244 0328,5	+53,303616	+26,699177	+14,577821	69
244 0294,0	+21,229165	-47,260807	-25,904020	69	244 0329,0	+49,843330	+31,853272	+17,395569	69
244 0294,5	+27,754574	-44,617973	-24,459430	69	244 0329,5	+45,774670	+36,616809	+19,999396	69
244 0295,0	+33,872355	-41,308507	-22,649300	69	244 0330,0	+41,155599	+40,936584	+22,360216	69
244 0295,5	+39,493835	-37,383936	-20,501808	69	244 0330,5	+36,048950	+44,765950	+24,452542	69
244 0296,0	+44,539147	-32,905492	-18,050461	69	244 0331,0	+30,521422	+48,064944	+26,254547	69
244 0296,5	+48,938655	-27,942745	-15,333346	69	244 0331,5	+24,642678	+50,800289	+27,748077	69
244 0297,0	+52,634159	-22,572142	-12,392316	69	244 0332,0	+18,484564	+52,945366	+28,918633	69
244 0297,5	+55,579811	-16,875368	- 9,272122	69	244 0332,5	+12,120374	+54,480137	+29,755314	69
244 0298,0	+57,742611	-10,937595	- 6,019417	69	244 0333,0	+ 5,624203	+55,390840	+30,250663	69
244 0298,5	+59,102575	- 4,845737	- 2,681837	69	244 0333,5	- 0,929554	+55,670017	+30,400680	69
244 0299,0	+59,652556	+ 1,313247	+ 0,692966	69	244 0334,0	- 7,466692	+55,316164	+30,204626	69
244 0299,5	+59,397648	+ 7,453955	+ 4,058177	69	244 0334,5	-13,913584	+54,333683	+29,664996	69
244 0300,0	+58,354504	+13,493929	+ 7,368582	69	244 0335,0	-20,197522	+52,732729	+28,787428	69
244 0300,5	+56,550223	+19,354846	+10,581244	69	244 0335,5	-26,247049	+50,529152	+27,580687	69
244 0301,0	+54,021275	+24,963492	+13,656006	69	244 0336,0	-31,992256	+47,744428	+26,056615	69
244 0301,5	+50,812238	+30,252458	+16,555899	69	244 0336,5	-37,365156	+44,405747	+24,230166	69
244 0302,0	+46,974619	+35,160660	+19,247412	69	244 0337,0	-42,300017	+40,545985	+22,119418	69
244 0302,5	+42,565616	+39,633578	+21,700633	69	244 0337,5	-46,733883	+36,203884	+19,745642	69
244 0303,0	+37,647143	+43,623486	+23,889367	69	244 0338,0	-50,607058	+31,424093	+17,133328	69
244 0303,5	+32,284706	+47,089311	+25,791070	69	244 0338,5	-53,863798	+26,257270	+14,310255	69
244 0304,0	+26,546688	+49,996671	+27,386868	69	244 0339,0	-56,453127	+20,760166	+11,307516	69
244 0304,5	+20,503518	+52,317619	+28,661414	69	244 0339,5	-58,329671	+14,995550	+ 8,159481	69
244 0305,0	+14,227134	+54,030522	+29,602822	69	244 0340,0	-59,454868	+ 9,032135	+ 4,903757	69
244 0305,5	+7,790446	+55,119860	+30,202557	69	244 0340,5	-59,797961	+ 2,944196	+ 1,580967	69
244 0306,0	+1,266935	+55,576059	+30,455345	69	244 0341,0	-59,337441	- 3,188899	- 1,765493	69
244 0306,5	- 5,269703	+55,395406	+30,359135	69	244 0341,5	-58,062195	- 9,283497	- 5,089915	69
244 0307,0	-11,745859	+54,579935	+29,915015	69	244 0342,0	-55,972852	-15,252723	- 8,344858	69
244 0307,5	-18,088307	+53,137445	+29,127240	69	244 0342,5	-53,082825	-21,007880	-11,481904	69
244 0308,0	-24,224493	+51,081475	+28,003223	69	244 0343,0	-49,419205	-26,460102	-14,452573	69
244 0308,5	-30,082906	+48,431503	+26,553611	69	244 0343,5	-45,023325	-31,522362	-17,209416	69
244 0309,0	-35,593441	+45,212935	+24,792322	69	244 0344,0	-39,950684	-36,111516	-19,707131	69
244 0309,5	-40,687901	+41,457357	+22,736653	69	244 0344,5	-34,270629	-40,150618	-21,903820	69
244 0310,0	-45,300577	+37,202632	+20,407343	69	244 0345,0	-28,065226	-43,571020	-23,762151	69
244 0310,5	-49,368939	+32,493047	+17,828657	69	244 0345,5	-21,427692	-46,314367	-25,250426	69
244 0311,0	-52,834516	+27,379426	+15,028435	69	244 0346,0	-14,460384	-48,334343	-26,343540	69
244 0311,5	-55,643804	+21,919068	+12,038071	69	244 0346,5	- 7,272279	-49,597840	-27,023616	69
244 0312,0	-57,749363	+16,175630	+ 8,892453	69	244 0347,0	+ 0,023648	-50,085796	-27,280449	69
244 0312,5	-59,110983	+10,218830	+ 5,629769	69	244 0347,5	+ 7,313204	-49,793440	-27,111651	69
244 0313,0	-59,696921	+ 4,123919	+ 2,291251	69	244 0348,0	+14,483656	-48,730056	-26,522494	69
244 0313,5	-59,485095	- 2,029058	- 1,079244	69	244 0348,5	+21,426184	-46,918262	-25,525538	69
244 0314,0	-58,464266	- 8,156256	- 4,435778	69	244 0349,0	+28,038090	-44,393062	-24,140087	69
244 0314,5	-56,635059	-14,171272	- 7,731015	69	244 0349,5	+34,224575	-41,200470	-22,391439	69
244 0315,0	-54,010717	-19,986630	-10,917034	69	244 0350,0	+39,900207	-37,396096	-20,310126	69
244 0315,5	-50,617652	-25,515463	-13,946238	69	244 0350,5	+44,989955	-33,043575	-17,931037	69
244 0316,0	-46,495548	-30,673307	-16,772354	69	244 0351,0	+49,429929	-28,213011	-15,292566	69

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z	J.D.	x	y	z		
244 0351,5	+53,167726	-22,979427	-12,435780	69	244 0386,5	+19,369230	+53,003247	+28,815262	69
244 0352,0	+56,162694	-17,421377	-9,403645	69	244 0387,0	+13,015125	+54,611900	+29,642953	69
244 0352,5	+58,385753	-11,619521	-6,240247	69	244 0387,5	+6,514127	+55,610054	+30,137937	69
244 0353,0	+59,819234	-5,655418	-2,990138	69	244 0388,0	-0,059384	+55,989331	+30,296191	69
244 0353,5	+60,456553	+0,389631	+0,302286	69	244 0388,5	-6,630902	+55,747613	+30,117106	69
244 0354,0	+60,301631	+6,435632	+3,593387	69	244 0389,0	-13,126393	+54,888875	+29,603398	69
244 0354,5	+59,368419	+12,404838	+6,840771	69	244 0389,5	-19,472810	+53,423133	+28,761067	69
244 0355,0	+57,680230	+18,222583	+10,003751	69	244 0390,0	-25,598654	+51,366305	+27,599322	69
244 0355,5	+55,269025	+23,818042	+13,043769	69	244 0390,5	-31,434421	+48,740040	+26,130483	69
244 0356,0	+52,174674	+29,124876	+15,924738	69	244 0391,0	-36,913151	+45,571630	+24,369936	69
244 0356,5	+48,444204	+34,081825	+18,613362	69	244 0391,5	-41,970771	+41,893738	+22,335962	69
244 0357,0	+44,130875	+38,633124	+21,079373	69	244 0392,0	-46,546651	+37,744360	+20,049733	69
244 0357,5	+39,293434	+42,728928	+23,295750	69	244 0392,5	-50,583972	+33,166615	+17,535183	69
244 0358,0	+33,995238	+46,325579	+25,238866	69	244 0393,0	-54,032024	+28,208597	+14,818918	69
244 0358,5	+28,303401	+49,385780	+26,888581	69	244 0393,5	-56,837621	+22,923270	+11,930159	69
244 0359,0	+22,287997	+51,878704	+28,228307	69	244 0394,0	-58,963797	+17,368295	+8,900640	69
244 0359,5	+16,021314	+53,780073	+29,245040	69	244 0394,5	-60,372188	+11,605846	+5,764506	69
244 0360,0	+9,577081	+55,072057	+29,929304	69	244 0395,0	-61,032765	+5,702435	+2,558204	69
244 0360,5	+3,029849	+55,743265	+30,275151	69	244 0395,5	-60,922781	+0,271351	+0,679667	69
244 0361,0	-3,545653	+55,788576	+30,280058	69	244 0396,0	-60,027544	-6,241204	-3,908555	69
244 0361,5	-10,075073	+55,209051	+29,944878	69	244 0396,5	-58,341344	-12,129574	-7,086238	69
244 0362,0	-16,484898	+54,011664	+29,273690	69	244 0397,0	-55,868379	-17,856307	-10,169161	69
244 0362,5	-22,702939	+52,209290	+28,273800	69	244 0397,5	-52,623666	-23,339498	-13,112928	69
244 0363,0	-28,658725	+49,820494	+26,955611	69	244 0398,0	-48,634043	-28,496593	-15,872905	69
244 0363,5	-34,283862	+46,869377	+25,325234	69	244 0398,5	-43,938892	-33,245723	-18,404947	69
244 0364,0	-39,512437	+43,385553	+23,420995	69	244 0399,0	-38,590829	-37,507396	-20,666342	69
244 0364,5	-44,281377	+39,404047	+21,240348	69	244 0399,5	-32,655901	-41,206373	-22,616809	69
244 0365,0	-48,530849	+34,965268	+18,812880	69	244 0400,0	-26,213474	-44,273808	-24,219684	69
244 0365,5	-52,204718	+30,114990	+16,163782	69	244 0400,5	-19,355533	-46,649531	-25,443139	69
244 0366,0	-55,251103	+24,904386	+13,321177	69	244 0401,0	-12,185329	-48,284290	-26,261385	69
244 0366,5	-57,622915	+19,389969	+10,316063	69	244 0401,5	-4,815384	-49,141798	-26,655781	69
244 0367,0	-59,278662	+13,633591	+7,182326	69	244 0402,0	+2,635108	-49,200509	-26,615754	69
244 0367,5	-60,183284	+7,702335	+3,956667	69	244 0402,5	+10,043394	-48,454779	-26,139412	69
244 0368,0	-60,309028	+1,668283	+0,678470	69	244 0403,0	+17,286625	-46,915438	-25,233822	69
244 0368,5	-59,636628	-4,391815	-2,610393	69	244 0403,5	+24,245360	-44,609579	-23,914862	69
244 0369,0	-58,156446	-10,397107	-5,865859	69	244 0404,0	+30,806965	-41,579644	-22,206687	69
244 0369,5	-55,869602	-16,263444	-9,042128	69	244 0404,5	+36,868568	-37,881844	-20,140837	69
244 0370,0	-52,789237	-21,904458	-12,092272	69	244 0405,0	+42,339448	-33,584074	-17,755099	69
244 0370,5	-48,941520	-27,732973	-14,968978	69	244 0405,5	+47,142788	-28,763556	-15,092183	69
244 0371,0	-44,366472	-32,162718	-17,625515	69	244 0406,0	+51,216611	-23,504249	-12,198326	69
244 0371,5	-39,118494	-36,610382	-20,016825	69	244 0406,5	+54,514178	-17,894430	-9,121970	69
244 0372,0	-33,266319	-40,497854	-22,100774	69	244 0407,0	+57,003656	-12,024357	-5,912487	69
244 0372,5	-26,892412	-43,754581	-23,839400	69	244 0407,5	+58,667517	-5,984288	-2,619116	69
244 0373,0	-20,091769	-46,319933	-25,200203	69	Epoch 1970.0				
244 0373,5	-12,970008	-48,145364	-26,157328	69	244 0399,0	-38,580436	-37,516020	-20,670092	70
244 0374,0	-5,640903	-49,196212	-26,692503	69	244 0399,5	-32,644492	-41,213669	-22,619983	70
244 0374,5	+1,776595	-49,452975	-26,795741	69	244 0400,0	-26,201224	-44,279665	-24,222232	70
244 0375,0	+9,161587	-48,911911	-26,465638	69	244 0400,5	-19,342633	-46,653854	-25,445021	70
244 0375,5	+16,394530	-47,585091	-25,709387	69	244 0401,0	-12,171985	-48,287011	-26,262570	70
244 0376,0	+23,360378	-45,499673	-24,542371	69	244 0401,5	-4,801811	-49,142871	-26,656250	70
244 0376,5	+29,951415	-42,696684	-22,987473	69	244 0402,0	+2,648691	-49,199917	-26,615499	70
244 0377,0	+36,069541	-39,229329	-21,074154	69	244 0402,5	+10,056764	-48,452532	-26,138437	70
244 0377,5	+41,628039	-35,161032	-18,837377	69	244 0403,0	+17,299563	-46,911572	-25,232144	70
244 0378,0	+46,552816	-30,563396	-16,316489	69	244 0403,5	+24,257654	-44,604158	-23,912508	70
244 0378,5	+50,782915	-25,514002	-13,554032	69	244 0404,0	+30,818415	-41,572756	-22,203695	70
244 0379,0	+54,270809	-20,094553	-10,594703	69	244 0404,5	+36,878991	-37,873602	-20,137256	70
244 0379,5	+56,982111	-14,388987	-7,484369	69	244 0405,0	+42,348679	-33,574609	-17,750986	70
244 0380,0	+58,895083	-8,481924	-4,269186	69	244 0405,5	+47,150682	-28,753018	-15,087604	70
244 0380,5	+59,999994	-2,457331	-0,994891	69	244 0406,0	+51,223048	-23,492801	-12,193350	70
244 0381,0	+60,298304	+3,602642	+2,293826	69	244 0406,5	+54,519062	-17,882245	-9,116674	70
244 0381,5	+59,801703	+9,618578	+5,553819	69	244 0407,0	+57,006916	-12,011616	-5,906949	70
244 0382,0	+58,531407	+15,514558	+8,743907	69	244 0407,5	+58,669107	-5,971175	-2,613416	70
244 0382,5	+56,517115	+21,218771	+11,825190	69	244 0408,0	+59,501371	+0,150524	+0,715735	70
244 0383,0	+53,796228	+26,663991	+14,761314	69	244 0408,5	+59,511490	+6,267975	+4,034084	70
244 0383,5	+50,413084	+31,788001	+17,518696	69	244 0409,0	+58,718104	+12,299743	+7,297542	70
244 0384,0	+46,418142	+36,533916	+20,066708	69	244 0409,5	+57,149331	+18,169243	+10,464731	70
244 0384,5	+41,867214	+40,850418	+22,377777	69	244 0410,0	+54,841638	+23,805239	+13,497276	70
244 0385,0	+36,820827	+44,692045	+24,427558	69	244 0410,5	+51,838698	+29,142211	+16,359976	70
244 0385,5	+31,343420	+48,019264	+26,194966	69	244 0411,0	+48,190375	+34,120558	+19,020913	70
244 0386,0	+25,502770	+50,798727	+27,662305	69					

J.D.	x	y	z	J.D.	x	y	z		
244 0411,5	+43,951822	+38,686697	+21,451506	70	244 0446,5	-46,584885	+37,717756	+19,823046	70
244 0412,0	+39,182676	+42,793124	+23,626519	70	244 0447,0	-50,672266	+33,139397	+17,264749	70
244 0412,5	+33,946377	+46,398460	+25,524103	70	244 0447,5	-54,177662	+28,181594	+14,508086	70
244 0413,0	+28,309485	+49,467393	+27,125746	70	244 0448,0	-57,054293	+22,899144	+11,583675	70
244 0413,5	+22,341150	+51,970768	+28,416312	70	244 0448,5	-59,261308	+17,351402	+8,524540	70
244 0414,0	+16,112504	+53,885468	+29,383988	70	244 0449,0	-60,764562	+11,601938	+5,365898	70
244 0414,5	+9,696172	+55,194530	+30,020334	70	244 0449,5	-61,537106	+5,717994	+2,144881	70
244 0415,0	+3,165738	+55,887038	+30,320206	70	244 0450,0	-61,559812	-0,230056	-1,099792	70
244 0415,5	-3,404770	+55,958148	+30,281791	70	244 0450,5	-60,821896	-6,169318	-4,328145	70
244 0416,0	-9,941379	+55,409106	+29,906600	70	244 0451,0	-59,321401	-12,025077	-7,499331	70
244 0416,5	-16,370701	+54,247127	+29,199381	70	244 0451,5	-57,065667	-17,721540	-10,572069	70
244 0417,0	-22,620469	+52,485465	+28,168178	70	244 0452,0	-54,071674	-23,182683	-13,505073	70
244 0417,5	-28,620064	+50,143218	+26,824204	70	244 0452,5	-50,366397	-28,333141	-16,257583	70
244 0418,0	-34,301073	+47,245342	+25,181836	70	244 0453,0	-45,986938	-33,099164	-18,789873	70
244 0418,5	-39,597833	+43,822432	+23,258512	70	244 0453,5	-40,980747	-37,409705	-21,063847	70
244 0419,0	-44,447951	+39,910578	+21,074620	70	244 0454,0	-35,405594	-41,197565	-23,043680	70
244 0419,5	-48,792864	+35,551190	+18,653422	70	244 0454,5	-29,329426	-44,400659	-24,696486	70
244 0420,0	-52,578401	+30,790790	+16,020904	70	244 0455,0	-22,829948	-46,963265	-25,993015	70
244 0420,5	-55,755242	+25,680719	+13,205632	70	244 0455,5	-15,994104	-48,837478	-26,908432	70
244 0421,0	-58,279484	+20,276890	+10,238604	70	244 0456,0	-8,917139	-49,984572	-27,423043	70
244 0421,5	-60,113243	+14,639528	+7,153091	70	244 0456,5	-1,701378	-50,376380	-27,523040	70
244 0422,0	-61,225101	+8,832757	+3,984415	70	244 0457,0	+5,545343	-49,996580	-27,201168	70
244 0422,5	-61,590715	+2,924286	+0,767965	70	244 0457,5	+12,711659	-48,841784	-26,457303	70
244 0423,0	-61,193377	-3,015046	-2,452050	70	244 0458,0	+19,684948	-46,922341	-25,298837	70
244 0423,5	-60,024585	-8,911734	-5,640877	70	244 0458,5	+26,353905	-44,262737	-23,740879	70
244 0424,0	-58,084716	-14,690164	-8,755521	70	244 0459,0	+32,611342	-40,901656	-21,806226	70
244 0424,5	-55,383572	-20,273285	-11,754124	70	244 0459,5	+38,356897	-36,891276	-19,524947	70
244 0425,0	-51,941086	-25,583394	-14,594607	70	244 0460,0	+43,499762	-32,296278	-16,933792	70
244 0425,5	-47,787845	-30,543073	-17,235188	70	244 0460,5	+47,961028	-27,192196	-14,075264	70
244 0426,0	-42,965669	-35,076319	-19,635003	70	244 0461,0	+51,675535	-21,663347	-10,996450	70
244 0426,5	-37,527975	-39,109872	-21,754831	70	244 0461,5	+54,593240	-15,800541	-7,747746	70
244 0427,0	-31,539919	-42,574650	-23,557896	70	244 0462,0	+56,679891	-9,698569	-4,381482	70
244 0427,5	-25,078383	-45,407511	-25,010813	70	244 0462,5	+57,917061	-3,453734	-0,950568	70
244 0428,0	-18,231441	-47,553026	-26,084553	70	244 0463,0	+58,301677	+2,838469	+2,492763	70
244 0428,5	-11,097494	-48,965424	-26,755481	70	244 0463,5	+57,844953	+9,085399	+5,898074	70
244 0429,0	-3,783785	-49,610410	-27,006348	70	244 0464,0	+56,571024	+15,198972	+9,217601	70
244 0429,5	+3,595557	-49,466878	-26,827169	70	244 0464,5	+54,515417	+21,096994	+12,406991	70
244 0430,0	+10,922032	-48,528299	-26,215975	70	244 0465,0	+51,723347	+26,704110	+15,425766	70
244 0430,5	+18,075717	-46,803685	-25,179273	70	244 0465,5	+48,248019	+31,952372	+18,237631	70
244 0431,0	+24,938519	-44,317868	-23,732170	70	244 0466,0	+44,149124	+36,781587	+20,810618	70
244 0431,5	+31,397489	-41,111159	-21,898142	70	244 0466,5	+39,491371	+41,139349	+23,117097	70
244 0432,0	+37,348067	-37,238395	-19,708460	70	244 0467,0	+34,343269	+44,980950	+25,133712	70
244 0432,5	+42,696876	-32,767182	-17,201208	70	244 0467,5	+28,776079	+48,269162	+26,841228	70
244 0433,0	+47,364031	-27,775775	-14,420096	70	244 0468,0	+22,862940	+50,973950	+28,224384	70
244 0433,5	+51,284755	-22,350566	-11,413060	70	244 0468,5	+16,678164	+53,072187	+29,271710	70
244 0434,0	+54,410242	-16,583398	-8,230793	70	244 0469,0	+10,296643	+54,547350	+29,975353	70
244 0434,5	+56,707774	-10,568938	-4,925316	70	244 0469,5	+3,793385	+55,389193	+30,330898	70
244 0435,0	+58,160321	-4,402272	-1,548657	70	244 0470,0	-2,756874	+55,593650	+30,337305	70
244 0435,5	+58,765547	+1,823242	+1,848274	70	244 0470,5	-9,280021	+55,162520	+29,996734	70
244 0436,0	+58,534536	+8,017700	+5,216646	70	244 0471,0	-15,702878	+54,103387	+29,314492	70
244 0436,5	+57,490248	+14,096022	+8,510401	70	244 0471,5	-21,953532	+52,429593	+28,299018	70
244 0437,0	+55,665965	+19,978913	+11,686776	70	244 0472,0	-27,961676	+50,160122	+26,961813	70
244 0437,5	+53,103762	+25,593519	+14,706631	70	244 0472,5	-33,658986	+47,319588	+25,317425	70
244 0438,0	+49,853022	+30,873788	+17,534629	70	244 0473,0	-38,979580	+43,938279	+23,383464	70
244 0438,5	+45,969153	+35,760629	+20,139314	70	244 0473,5	-43,860512	+40,052086	+21,180567	70
244 0439,0	+41,512476	+40,201942	+22,493100	70	244 0474,0	-48,242310	+35,702486	+18,732367	70
244 0439,5	+36,547160	+44,152478	+24,572193	70	244 0474,5	-52,069596	+30,936428	+16,065423	70
244 0440,0	+31,140450	+47,573710	+26,356507	70	244 0475,0	-55,291859	+25,806272	+13,209182	70
244 0440,5	+25,361983	+50,433692	+27,829584	70	244 0475,5	-57,864035	+20,369451	+10,195775	70
244 0441,0	+19,283146	+52,706838	+28,978452	70	244 0476,0	-59,747441	+14,688241	+7,059880	70
244 0441,5	+12,976587	+54,373755	+29,793542	70	244 0476,5	-60,910386	+8,829269	+3,838441	70
244 0442,0	+6,515787	+55,421208	+30,268669	70	244 0477,0	-61,329064	+2,863001	+0,570370	70
244 0442,5	-0,025391	+55,841915	+30,400892	70	244 0477,5	-60,988172	-3,136955	-2,703835	70
244 0443,0	-6,573078	+55,634540	+30,190525	70	244 0478,0	-59,881586	-9,094641	-5,942540	70
244 0443,5	-13,053826	+54,803704	+29,641130	70	244 0478,5	-58,012917	-14,932630	-9,103473	70
244 0444,0	-19,395013	+53,359810	+28,759422	70	244 0479,0	-55,395874	-20,573052	-12,144277	70
244 0444,5	-25,525334	+51,319193	+27,555334	70	244 0479,5	-52,054594	-25,938671	-15,023112	70
244 0445,0	-31,375227	+48,703927	+26,041914	70	244 0480,0	-48,023670	-30,953997	-17,699261	70
244 0445,5	-36,877468	+45,541937	+24,235378	70	244 0480,5	-43,348189	-35,546522	-20,133821	70
244 0446,0	-41,967663	+41,866816	+22,154991	70	244 0481,0	-38,083365	-39,647838	-22,290281	70

RECTANGULAR COORDINATES OF THE MOON 1952-1971

97

J.D.	x	y	z	J.D.	x	y	z		
244 0481,5	-32,294253	-43,194930	-24,135255	70	244 0516,5	+56,858609	-12,812399	-6,028220	70
244 0482,0	-26,055023	-46,131290	-25,639052	70	244 0517,0	+58,322118	-6,704415	-2,679426	70
244 0482,5	-19,448210	-48,408056	-26,776310	70	244 0517,5	+58,957780	-0,495325	+0,709960	70
244 0483,0	-12,563732	-49,985137	-27,526576	70	244 0518,0	+58,765518	+5,726145	+4,091591	70
244 0483,5	-5,497689	-50,832176	-27,874831	70	244 0518,5	+57,757865	+11,872877	+7,418228	70
244 0484,0	+1,648997	-50,929440	-27,811937	70	244 0519,0	+55,959306	+17,860876	+10,644536	70
244 0484,5	+8,772150	-50,268583	-27,335039	70	244 0519,5	+53,405363	+23,610574	+13,727815	70
244 0485,0	+15,766080	-48,853226	-26,447846	70	244 0520,0	+50,141500	+29,047989	+16,628564	70
244 0485,5	+22,525487	-46,699291	-25,160790	70	244 0520,5	+46,221893	+34,105679	+19,311023	70
244 0486,0	+28,947473	-43,835121	-23,491054	70	244 0521,0	+41,708006	+38,723372	+21,743472	70
244 0486,5	+34,933698	-40,301313	-21,462445	70	244 0521,5	+36,667310	+42,848537	+23,898509	70
244 0487,0	+40,392456	-36,150140	-19,105043	70	244 0522,0	+31,171882	+46,436573	+25,753152	70
244 0487,5	+45,240717	-31,444684	-16,454701	70	244 0522,5	+25,297135	+49,450898	+27,288847	70
244 0488,0	+49,406059	-26,257654	-13,552351	70	244 0523,0	+19,120664	+51,862885	+28,491421	70
244 0488,5	+52,828205	-20,669775	-10,443115	70	244 0523,5	+12,721172	+53,651584	+29,350905	70
244 0489,0	+55,460374	-14,768052	-7,175317	70	244 0524,0	+6,177614	+54,803494	+29,861404	70
244 0489,5	+57,270016	-8,643695	-3,799350	70	244 0524,5	-0,431588	+55,312174	+30,020852	70
244 0490,0	+58,239272	-2,390080	-0,366553	70	244 0525,0	-7,029159	+55,177824	+29,830798	70
244 0490,5	+58,364771	+3,899355	+3,071951	70	244 0525,5	-13,539473	+54,407017	+29,296229	70
244 0491,0	+57,657162	+10,133070	+6,466299	70	244 0526,0	-19,888946	+53,012217	+28,425310	70
244 0491,5	+56,140087	+16,223204	+9,768869	70	244 0526,5	-26,006384	+51,011614	+27,292976	70
244 0492,0	+53,848969	+22,087064	+12,935043	70	244 0527,0	-31,823233	+48,428771	+25,722254	70
244 0492,5	+50,829511	+27,648318	+15,923865	70	244 0527,5	-37,273881	+45,292513	+23,921169	70
244 0493,0	+47,136171	+32,837884	+18,698483	70	244 0528,0	-42,295832	+41,636672	+21,845621	70
244 0493,5	+42,830505	+37,594456	+21,226416	70	244 0528,5	-46,830054	+37,500115	+19,517884	70
244 0494,0	+37,979682	+41,864821	+23,479700	70	244 0529,0	-50,821311	+32,926636	+16,962838	70
244 0494,5	+32,655070	+45,603902	+25,434895	70	244 0529,5	-54,218479	+27,964906	+14,207940	70
244 0495,0	+26,930984	+48,774680	+27,073005	70	244 0530,0	-56,975155	+22,668495	+11,283215	70
244 0495,5	+20,883565	+51,347852	+28,379302	70	244 0530,5	-59,050096	+17,095771	+8,221189	70
244 0496,0	+14,589930	+53,301626	+29,343163	70	244 0531,0	-60,408034	+11,309835	+5,056851	70
244 0496,5	+8,127381	+54,621215	+29,957822	70	244 0531,5	-61,020357	+5,378325	+1,827511	70
244 0497,0	+1,572853	+55,298613	+30,220198	70	244 0532,0	-60,866104	-0,626914	-1,427378	70
244 0497,5	-4,997590	+55,332150	+30,130664	70	244 0532,5	-59,932781	-6,630270	-4,666491	70
244 0498,0	-11,509116	+54,726224	+29,692897	70	244 0533,0	-58,217430	-12,553060	-7,847029	70
244 0498,5	-17,888452	+53,491073	+28,913728	70	244 0533,5	-55,727507	-18,314381	-10,925192	70
244 0499,0	-24,064141	+51,642506	+27,803015	70	244 0534,0	-52,481789	-23,832254	-13,856827	70
244 0499,5	-29,966835	+49,201884	+26,373606	70	244 0534,5	-48,511020	-29,024982	-16,598172	70
244 0500,0	-35,529569	+46,195951	+24,641253	70	244 0535,0	-43,858342	-33,812716	-19,106718	70
244 0500,5	-40,688059	+42,656809	+22,624581	70	244 0535,5	-38,579383	-38,119200	-21,342154	70
244 0501,0	-45,381124	+38,621924	+20,345101	70	244 0536,0	-32,741965	-41,873654	-23,267392	70
244 0501,5	-49,551130	+34,134123	+17,827183	70	244 0536,5	-26,425333	-45,012591	-24,849525	70
244 0502,0	-53,144487	+29,241546	+15,098035	70	244 0537,0	-19,718966	-47,481633	-26,060798	70
244 0502,5	-56,112309	+23,997616	+12,187656	70	244 0537,5	-12,720930	-49,237064	-26,879425	70
244 0503,0	-58,411171	+18,460944	+9,128792	70	244 0538,0	-5,535885	-50,247123	-27,290230	70
244 0503,5	-60,003831	+12,695077	+5,956767	70	244 0538,5	+1,727187	-50,492929	-27,285119	70
244 0504,0	-60,860088	+6,768177	+2,709305	70	244 0539,0	+8,957409	-49,968959	-26,863295	70
244 0504,5	-60,957767	+0,752577	-0,573742	70	244 0539,5	+16,044458	-48,683149	-26,031255	70
244 0505,0	-60,283517	-5,275898	-3,850767	70	244 0540,0	+22,880947	-46,656566	-24,802565	70
244 0505,5	-58,833683	-11,238740	-7,078867	70	244 0540,5	+29,364604	-43,922683	-23,197431	70
244 0506,0	-56,615059	-17,055768	-10,214418	70	244 0541,0	+35,400222	-40,526419	-21,242126	70
244 0506,5	-53,645459	-22,646293	-13,213706	70	244 0541,5	+40,901294	-36,522886	-18,968285	70
244 0507,0	-49,954103	-27,930459	-16,033668	70	244 0542,0	+45,791360	-31,976037	-16,412148	70
244 0507,5	-45,581736	-32,830652	-18,632671	70	244 0542,5	+50,004971	-26,957145	-13,613692	70
244 0508,0	-40,580554	-37,273063	-20,971363	70	244 0543,0	+53,488453	-21,543335	-10,615854	70
244 0508,5	-35,013613	-41,189102	-23,013419	70	244 0543,5	+56,200255	-15,816027	-7,463636	70
244 0509,0	-28,954222	-44,516977	-24,726411	70	244 0544,0	+58,111201	-9,859482	-4,203346	70
244 0509,5	-22,484784	-47,202951	-26,082465	70	244 0544,5	+59,204450	-3,759382	-0,881806	70
244 0510,0	-15,695558	-49,202606	-27,058926	70	244 0545,0	+59,475228	+2,398531	+2,454383	70
244 0510,5	-8,683111	-50,481830	-27,638866	70	244 0545,5	+58,930452	+8,529735	+5,759512	70
244 0511,0	-1,548655	-51,017641	-27,811525	70	244 0546,0	+57,588180	+14,552088	+8,989398	70
244 0511,5	+5,603773	-50,978682	-27,572518	70	244 0546,5	+55,476976	+20,386936	+12,101970	70
244 0512,0	+12,669173	-49,825560	-26,924006	70	244 0547,0	+52,634979	+25,960043	+15,057751	70
244 0512,5	+19,543447	-48,110868	-25,874678	70	244 0547,5	+49,109107	+31,202472	+17,820334	70
244 0513,0	+26,125277	-45,679004	-24,439606	70	244 0548,0	+44,954043	+36,051309	+20,356738	70
244 0513,5	+32,317927	-42,565772	-22,639998	70	244 0548,5	+40,231149	+40,450238	+22,637703	70
244 0514,0	+38,030902	-38,817670	-20,502787	70	244 0549,0	+35,007408	+44,350018	+24,637938	70
244 0514,5	+43,181618	-34,491150	-18,060193	70	244 0549,5	+29,354270	+47,708727	+26,336217	70
244 0515,0	+47,696705	-29,651451	-15,349064	70	244 0550,0	+23,346647	+50,492070	+27,715527	70
244 0515,5	+51,513374	-24,371507	-12,410256	70	244 0550,5	+17,061760	+52,673290	+28,763001	70
244 0516,0	+54,580312	-18,730490	-9,287820	70	244 0551,0	+10,578200	+54,233159	+29,469895	70

J.D.	x	y	z	J.D.	x	y	z		
244 0551,5	+ 3,975001	+55,159794	+29,831469	70	244 0586,5	-62,186046	+ 2,226252	- 0,522225	70
244 0552,0	- 2,669184	+55,448480	+29,846857	70	244 0587,0	-61,646503	- 3,649014	- 3,675958	70
244 0552,5	- 9,276814	+55,101264	+29,518856	70	244 0587,5	-60,347421	- 9,477891	- 6,783747	70
244 0553,0	-15,772083	+54,126703	+28,853752	70	244 0588,0	-58,290098	-15,187525	- 9,806211	70
244 0553,5	-22,081452	+52,539489	+27,861131	70	244 0588,5	-55,484557	-20,703388	-12,703297	70
244 0554,0	-28,134094	+50,360087	+26,553640	70	244 0589,0	-51,950306	-25,949891	-15,434652	70
244 0554,5	-33,862271	+47,614433	+24,946844	70	244 0589,5	-47,717106	-30,851237	-17,960103	70
244 0555,0	-39,201647	+44,333625	+23,059036	70	244 0590,0	-42,825631	-35,332449	-20,240227	70
244 0555,5	-44,091547	+40,553634	+20,911074	70	244 0590,5	-37,328018	-39,320612	-22,237050	70
244 0556,0	-48,475305	+36,315191	+18,526312	70	244 0591,0	-31,288308	-42,746469	-23,914917	70
244 0556,5	-52,300403	+31,663472	+15,930420	70	244 0591,5	-24,782460	-45,546123	-25,241416	70
244 0557,0	-55,518877	+26,648075	+13,151370	70	244 0592,0	-17,898049	-47,663041	-26,188454	70
244 0557,5	-58,087649	+21,322881	+10,219340	70	244 0592,5	-10,733413	-49,050114	-26,733338	70
244 0558,0	-59,968876	+15,745928	+ 7,166642	70	244 0593,0	- 3,396188	-49,671698	-26,859852	70
244 0558,5	-61,130551	+ 9,979342	+ 4,027664	70	244 0593,5	+ 3,998750	-49,505429	-26,559169	70
244 0559,0	-61,547000	+ 4,089181	+ 0,838780	70	244 0594,0	+11,331904	-48,543842	-25,830652	70
244 0559,5	-61,199711	- 1,854766	- 2,361790	70	244 0594,5	+18,482290	-46,795266	-24,682243	70
244 0560,0	-60,077934	- 7,779301	- 5,534166	70	244 0595,0	+25,330822	-44,284224	-23,130600	70
244 0560,5	-58,179759	-13,608268	- 8,637076	70	244 0595,5	+31,763822	-41,051082	-21,200790	70
244 0561,0	-55,512866	-19,263182	-11,628219	70	244 0596,0	+37,676287	-37,150896	-18,925572	70
244 0561,5	-52,095564	-24,664090	-14,464759	70	244 0596,5	+42,974704	-32,651626	-16,344372	70
244 0562,0	-47,957610	-29,730694	-17,103947	70	244 0597,0	+47,579400	-27,631977	-13,502018	70
244 0562,5	-43,140904	-34,383701	-19,503874	70	244 0597,5	+51,425990	-22,178745	-10,447284	70
244 0563,0	-37,700032	-38,546519	-21,624402	70	244 0598,0	+54,466141	-16,384155	- 7,231423	70
244 0563,5	-31,702302	-42,147076	-23,428147	70	244 0598,5	+56,667749	-10,343293	- 3,906779	70
244 0564,0	-25,227502	-45,119943	-24,881614	70	244 0599,0	+58,014361	- 4,151697	- 0,525484	70
244 0564,5	-18,366967	-47,408368	-25,956283	70	244 0599,5	+58,504232	+ 2,096704	+ 2,861605	70
244 0565,0	-11,222161	-48,966322	-26,629683	70	244 0600,0	+58,149061	+ 8,311276	+ 6,205808	70
244 0565,5	- 3,902690	-49,760366	-26,886348	70	244 0600,5	+56,972577	+14,406027	+ 9,461284	70
244 0566,0	+ 3,476245	-49,771027	-26,718494	70	244 0601,0	+55,009036	+20,300573	+12,585540	70
244 0566,5	+10,796707	-48,993749	-26,126477	70	244 0601,5	+52,301782	+25,920848	+15,539756	70
244 0567,0	+17,941119	-47,439271	-25,118923	70	244 0602,0	+48,901801	+31,199522	+18,288974	70
244 0567,5	+24,795534	-45,133300	-23,712464	70	244 0602,5	+44,866549	+36,076286	+20,802225	70
244 0568,0	+31,251629	-42,115716	-21,931246	70	244 0603,0	+40,258729	+40,497933	+23,052533	70
244 0568,5	+37,211043	-38,439157	-19,806112	70	244 0603,5	+35,145343	+44,418412	+25,016931	70
244 0569,0	+42,585613	-34,167273	-17,373591	70	244 0604,0	+29,596753	+47,798769	+26,676378	70
244 0569,5	+47,299872	-29,372799	-14,674836	70	244 0604,5	+23,685863	+50,607009	+28,015699	70
244 0570,0	+51,291708	-24,135347	-11,754393	70	244 0605,0	+17,487467	+52,818118	+29,023534	70
244 0570,5	+54,512987	-18,539455	- 8,659145	70	244 0605,5	+11,077515	+54,413858	+29,692249	70
244 0571,0	+56,929398	-12,672509	- 5,437185	70	244 0606,0	+ 4,532530	+55,382661	+30,017832	70
244 0571,5	+58,520256	- 6,623039	- 2,136887	70	244 0606,5	- 2,070989	+55,719546	+29,999843	70
244 0572,0	+59,277847	- 0,479106	+ 1,193933	70	244 0607,0	- 8,657151	+55,425969	+29,641326	70
244 0572,5	+59,206596	+ 5,673051	+ 4,508744	70	244 0607,5	-15,151211	+54,509677	+28,948695	70
244 0573,0	+58,322236	+11,750142	+ 7,762886	70	244 0608,0	-21,480130	+52,984518	+27,931630	70
244 0573,5	+56,650853	+17,672784	+10,914068	70	244 0608,5	-27,573104	+50,870277	+26,602958	70
244 0574,0	+54,227796	+23,366270	+13,922751	70	244 0609,0	-33,362088	+48,192485	+24,978550	70
244 0574,5	+51,096809	+28,761196	+16,752482	70	244 0609,5	-38,782311	+44,982153	+23,077155	70
244 0575,0	+47,308980	+33,793990	+19,370134	70	244 0610,0	-43,772734	+41,275516	+20,920237	70
244 0575,5	+42,921817	+38,407264	+21,746111	70	244 0610,5	-48,276588	+37,113772	+18,531839	70
244 0576,0	+37,998310	+42,550164	+23,854471	70	244 0611,0	-52,241727	+32,542721	+15,938349	70
244 0576,5	+32,606056	+46,178600	+25,673076	70	244 0611,5	-55,621103	+27,612461	+13,168351	70
244 0577,0	+26,816376	+49,255434	+27,183626	70	244 0612,0	-58,373122	+22,377032	+10,252392	70
244 0577,5	+20,703436	+51,750549	+28,371717	70	244 0612,5	-60,462039	+16,894065	+ 7,222802	70
244 0578,0	+14,343421	+53,640914	+29,226825	70	244 0613,0	-61,858274	+11,224411	+ 4,113460	70
244 0578,5	+ 7,813734	+54,910548	+29,742281	70	244 0613,5	-62,538806	+ 5,431764	+ 0,959596	70
244 0579,0	+ 1,192208	+55,550483	+29,915233	70	244 0614,0	-62,487455	- 0,417729	- 2,202442	70
244 0579,5	+5,443640	+55,558519	+29,746491	70	244 0614,5	-61,695304	- 6,255865	- 5,335410	70
244 0580,0	-12,017299	+54,939196	+29,240495	70	244 0615,0	-60,160980	-12,012828	- 8,401421	70
244 0580,5	-18,453909	+53,703386	+28,405070	70	244 0615,5	-57,891068	-17,617646	-11,362120	70
244 0581,0	-24,680857	+51,868129	+27,251339	70	244 0616,0	-54,900543	-22,998723	-14,179425	70
244 0581,5	-30,628321	+49,456345	+25,793532	70	244 0616,5	-51,213156	-28,084437	-16,814979	70
244 0582,0	-36,229725	+46,496439	+24,048781	70	244 0617,0	-46,861865	-32,803847	-19,231446	70
244 0582,5	-41,422199	+43,022075	+22,036961	70	244 0617,5	-41,889255	-37,087551	-21,392533	70
244 0583,0	-46,146908	+39,071765	+19,780492	70	244 0618,0	-36,347861	-40,868649	-23,263619	70
244 0583,5	-50,349464	+34,688659	+17,304176	70	244 0618,5	-30,300429	-44,083914	-24,812393	70
244 0584,0	-53,980147	+29,920163	+14,635010	70	244 0619,0	-23,819963	-46,675118	-26,009578	70
244 0584,5	-56,994308	+24,817758	+11,802063	70	244 0619,5	-16,989572	-48,590550	-26,829752	70
244 0585,0	-59,352593	+19,436695	+ 8,836304	70	244 0620,0	- 9,901947	-49,786641	-27,252122	70
244 0585,5	-61,021342	+13,835801	+ 5,770488	70	244 0620,5	- 2,658449	-50,229716	-27,261888	70
244 0586,0	-61,972887	+ 8,077229	+ 2,639010	70	244 0621,0	+ 4,632311	-49,897698	-26,850233	70

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z	J.D.	x	y	z		
244 0621,5	+11,856392	-48,781691	-26,016026	70	244 0656,5	+49,010543	+28,169374	+16,878031	70
244 0622,0	+18,896990	-46,887264	-24,765965	70	244 0657,0	+45,142757	+33,396796	+19,585614	70
244 0622,5	+25,637342	-44,235339	-23,115081	70	244 0657,5	+40,657721	+38,160414	+22,021376	70
244 0623,0	+31,963957	-40,862489	-21,086788	70	244 0658,0	+35,629798	+42,406924	+24,158862	70
244 0623,5	+37,769965	-36,820518	-18,712541	70	244 0658,5	+30,137021	+46,092370	+25,976822	70
244 0624,0	+42,958365	-32,175380	-16,031158	70	244 0659,0	+24,259675	+49,181908	+27,459003	70
244 0624,5	+47,444932	-27,005392	-13,087750	70	244 0659,5	+18,079041	+51,649238	+28,593845	70
244 0625,0	+51,160532	-21,398879	-9,932374	70	244 0660,0	+11,676471	+53,476213	+29,374195	70
244 0625,5	+54,052661	-15,451411	-6,618489	70	244 0660,5	+5,132591	+54,652220	+29,796978	70
244 0626,0	+56,086274	-9,262906	-3,201365	70	244 0661,0	-1,473273	+55,173783	+29,862947	70
244 0626,5	+57,243695	-2,934729	+0,263499	70	244 0661,5	-8,063595	+55,043962	+29,576329	70
244 0627,0	+57,523915	+3,432964	+3,721784	70	244 0662,0	-14,562986	+54,272057	+28,944678	70
244 0627,5	+56,941277	+7,743496	+7,121539	70	244 0662,5	-20,898515	+52,873219	+27,978635	70
244 0628,0	+55,523874	+15,905529	+10,414147	70	244 0663,0	-26,999978	+50,868128	+26,691748	70
244 0628,5	+53,311625	+21,834446	+13,555003	70	244 0663,5	-32,800151	+48,282828	+25,100367	70
244 0629,0	+50,354364	+27,453274	+16,503962	70	244 0664,0	-38,235096	+45,148504	+23,223538	70
244 0629,5	+46,709990	+32,693232	+19,225574	70	244 0664,5	-43,244424	+41,501284	+21,082853	70
244 0630,0	+42,442788	+37,493980	+21,689168	70	244 0665,0	-47,771671	+37,382140	+18,702406	70
244 0630,5	+37,621865	+41,803603	+23,868795	70	244 0665,5	-51,764686	+32,836725	+16,108676	70
244 0631,0	+32,319886	+45,578457	+25,743100	70	244 0666,0	-55,176037	+27,915163	+13,330414	70
244 0631,5	+26,611933	+48,782853	+27,295130	70	244 0666,5	-57,963571	+22,671922	+10,398541	70
244 0632,0	+20,574625	+51,388813	+28,512156	70	244 0667,0	-60,090849	+17,165473	+7,345959	70
244 0632,5	+14,285314	+53,375610	+29,385406	70	244 0667,5	-61,527703	+11,457988	+4,207351	70
244 0633,0	+7,821510	+54,729555	+29,909940	70	244 0668,0	-62,250844	+5,614963	+1,018982	70
244 0633,5	+1,260296	+55,443585	+30,084384	70	244 0668,5	-62,244352	-0,295317	-2,181633	70
244 0634,0	-5,322087	+55,517056	+29,910830	70	244 0669,0	-61,500205	-6,202327	-5,356025	70
244 0634,5	-11,850684	+54,955512	+29,394695	70	244 0669,5	-60,018704	-12,033985	-8,465164	70
244 0635,0	-18,252211	+53,770423	+28,544541	70	244 0670,0	-57,808926	-17,717395	-11,469872	70
244 0635,5	-24,455457	+51,979063	+27,372036	70	244 0670,5	-54,889001	-23,179700	-14,331306	70
244 0636,0	-30,391668	+49,604317	+25,891805	70	244 0671,0	-51,286232	-28,348948	-17,011418	70
244 0636,5	-35,994989	+46,674517	+24,121339	70	244 0671,5	-47,037271	-33,155081	-19,473499	70
244 0637,0	-41,202865	+43,223278	+22,080890	70	244 0672,0	-42,187991	-37,530899	-21,682714	70
244 0637,5	-45,956516	+39,289304	+19,793360	70	244 0672,5	-36,793267	-41,413051	-23,606601	70
244 0638,0	-50,201411	+34,916196	+17,284164	70	244 0673,0	-30,916712	-44,743132	-25,215682	70
244 0638,5	-53,887760	+30,152210	+14,581097	70	244 0673,5	-24,630070	-47,468560	-26,483901	70
244 0639,0	-56,970999	+25,049929	+11,714126	70	244 0674,0	-18,012711	-49,543740	-27,389243	70
244 0639,5	-59,412230	+19,665943	+8,715215	70	244 0674,5	-11,150730	-50,930884	-27,914149	70
244 0640,0	-61,178833	+14,060482	+5,618107	70	244 0675,0	-4,136059	-51,601008	-28,046016	70
244 0640,5	-62,244728	+8,296941	+2,458043	70	244 0675,5	+2,934654	-51,534795	-27,777639	70
244 0641,0	-62,590918	+2,441147	-0,728493	70	244 0676,0	+9,961350	-50,723347	-27,107561	70
244 0641,5	-62,205912	-3,437809	-3,904082	70	244 0676,5	+16,842004	-49,168862	-26,040397	70
244 0642,0	-61,085948	-9,270862	-7,030688	70	244 0677,0	+23,474270	-46,885105	-24,587032	70
244 0642,5	-59,235374	-14,986877	-10,070000	70	244 0677,5	+29,757299	-43,897836	-22,764790	70
244 0643,0	-56,666936	-20,514652	-12,983801	70	244 0678,0	+35,593684	-40,244810	-20,597371	70
244 0643,5	-53,401953	-25,783346	-15,734347	70	244 0678,5	+40,891513	-35,975632	-18,114688	70
244 0644,0	-49,470471	-30,723186	-18,284758	70	244 0679,0	+45,566471	-31,151208	-15,352526	70
244 0644,5	-44,911454	-35,266291	-20,599483	70	244 0679,5	+49,543908	-25,842907	-12,351988	70
244 0645,0	-39,772739	-39,347450	-22,644697	70	244 0680,0	+52,760743	-20,131270	-9,158761	70
244 0645,5	-34,111152	-42,905106	-24,388869	70	244 0680,5	+55,167141	-14,104415	-5,822173	70
244 0646,0	-27,992277	-45,882257	-25,803214	70	244 0681,0	+56,727819	-7,856105	-2,394112	70
244 0646,5	-21,490341	-48,227611	-26,862336	70	244 0681,5	+57,422821	-1,483572	+1,072171	70
244 0647,0	-14,687722	-49,896614	-27,544764	70	244 0682,0	+57,248007	+4,914750	+4,523315	70
244 0647,5	-7,674409	-50,852733	-27,833625	70	244 0682,5	+56,214690	+11,241556	+7,907085	70
244 0648,0	-0,547135	-51,068635	-27,717265	70	244 0683,0	+54,348941	+17,402846	+11,173536	70
244 0648,5	+6,591775	-50,527475	-27,189894	70	244 0683,5	+51,690413	+23,309892	+14,276033	70
244 0649,0	+13,635880	-49,223968	-26,252139	70	244 0684,0	+48,290788	+28,880908	+17,172110	70
244 0649,5	+20,476467	-47,165517	-24,911579	70	244 0684,5	+44,211884	+34,042302	+19,824069	70
244 0650,0	+27,004768	-44,372950	-23,183083	70	244 0685,0	+39,523746	+38,729557	+22,199403	70
244 0650,5	+33,114413	-40,880913	-21,088937	70	244 0685,5	+34,302750	+42,887784	+24,271030	70
244 0651,0	+38,704196	-36,737900	-18,658773	70	244 0686,0	+28,629668	+46,471802	+26,017273	70
244 0651,5	+43,680835	-32,005694	-15,929169	70	244 0686,5	+22,588057	+49,446117	+27,421786	70
244 0652,0	+47,961748	-26,758266	-12,942970	70	244 0687,0	+16,262737	+51,784541	+28,473301	70
244 0652,5	+51,477409	-21,080074	-9,748268	70	244 0687,5	+9,738539	+53,469665	+29,165307	70
244 0653,0	+54,173414	-15,063920	-6,397194	70	244 0688,0	+3,099343	+54,492423	+29,495767	70
244 0653,5	+56,011838	-8,808431	-2,944488	70	244 0688,5	-3,572776	+54,851346	+29,466703	70
244 0654,0	+56,971873	-2,415290	+0,554010	70	244 0689,0	-10,198119	+54,552052	+29,083881	70
244 0654,5	+57,049876	+4,013485	+4,042846	70	244 0689,5	-16,699855	+53,606703	+28,356511	70
244 0655,0	+56,258494	+10,378156	+7,468340	70	244 0690,0	-23,004334	+52,033413	+27,296917	70
244 0655,5	+54,625520	+16,583550	+10,779781	70	244 0690,5	-29,041352	+49,855889	+25,920324	70
244 0656,0	+52,192041	+22,540920	+13,930393	70	244 0691,0	-34,744378	+47,103064	+24,244658	70

J.D.	x	y	z	J.D.	x	y	z		
244 0691,5	-40,050722	+43,808791	+22,290361	70	244 0726,5	-42,883667	-36,007700	-20,800399	70
244 0692,0	-44,901704	+40,011573	+20,080265	70	244 0727,0	-37,474420	-40,054466	-22,763611	70
244 0692,5	-49,242944	+35,754443	+17,639483	70	244 0727,5	-31,550571	-43,553783	-24,414387	70
244 0693,0	-53,024547	+31,084753	+14,995304	70	244 0728,0	-25,187224	-46,447106	-25,724230	70
244 0693,5	-56,201481	+26,054049	+12,177116	70	244 0728,5	-18,468821	-48,683616	-26,669129	70
244 0694,0	-58,733964	+20,717932	+ 9,216302	70	244 0729,0	-11,487973	-50,221650	-27,230300	70
244 0694,5	-60,587901	+15,135868	+ 6,146134	70	244 0729,5	- 4,343954	-51,029990	-27,394816	70
244 0695,0	-61,735386	+ 9,370944	+ 3,001611	70	244 0730,0	+ 2,859108	-51,088976	-27,156124	70
244 0695,5	-62,155321	+ 3,489582	- 0,180710	70	244 0730,5	+10,014264	-50,391275	-26,514384	70
244 0696,0	-61,833989	- 2,438882	- 3,362958	70	244 0731,0	+17,013961	-48,942286	-25,476612	70
244 0696,5	-60,765644	- 8,342698	- 6,506254	70	244 0731,5	+23,752279	-46,760215	-24,056617	70
244 0697,0	-58,953172	-14,148352	- 9,571074	70	244 0732,0	+30,127154	-43,875817	-22,274783	70
244 0697,5	-56,408554	-19,781345	-12,517679	70	244 0732,5	+36,042451	-40,331689	-20,157620	70
244 0698,0	-53,153404	-25,167102	-15,306635	70	244 0733,0	+41,409868	-36,181399	-17,737205	70
244 0698,5	-49,219227	-30,232003	-17,899379	70	244 0733,5	+46,150556	-31,488245	-15,050472	70
244 0699,0	-44,647596	-34,904536	-20,258831	70	244 0734,0	+50,196446	-26,323908	-12,138425	70
244 0699,5	-39,490095	-39,116519	-22,350074	70	244 0734,5	+53,491370	-20,766961	- 9,045303	70
244 0700,0	-33,808042	-42,804356	-24,141002	70	244 0735,0	+55,991712	-14,901262	- 5,817688	70
244 0700,5	-27,671987	-45,910351	-25,603013	70	244 0735,5	+57,666890	- 8,814350	- 2,503633	70
244 0701,0	-21,160918	-48,383897	-26,711629	70	244 0736,0	+58,499596	- 2,595860	+ 0,848202	70
244 0701,5	-14,361256	-50,182636	-27,447070	70	244 0736,5	+58,485621	+ 3,664075	+ 4,189400	70
244 0702,0	- 7,365659	-51,273529	-27,794807	70	244 0737,0	+57,633583	+ 9,876300	+ 7,472571	70
244 0702,5	- 2,271590	-51,633676	-27,745935	70	244 0737,5	+55,964448	+15,954089	+10,652094	70
244 0703,0	+ 6,820253	-51,250970	-27,297480	70	244 0738,0	+53,510715	+21,814419	+13,684802	70
244 0703,5	+13,807589	-50,124671	-26,452648	70	244 0738,5	+50,315635	+27,379215	+16,530585	70
244 0704,0	+20,588314	-48,265558	-25,220835	70	244 0739,0	+46,432069	+32,576351	+19,152905	70
244 0704,5	+27,062303	-45,696051	-23,617647	70	244 0739,5	+41,921382	+37,340569	+21,519240	70
244 0705,0	+33,133163	-42,449948	-21,664669	70	244 0740,0	+36,852197	+41,614247	+23,601437	70
244 0705,5	+38,710031	-38,572065	-19,389235	70	244 0740,5	+31,298983	+45,347847	+25,375912	70
244 0706,0	+43,709216	-34,117559	-16,823978	70	244 0741,0	+25,340826	+48,500419	+26,823866	70
244 0706,5	+48,055835	-29,151091	-14,006340	70	244 0741,5	+19,059975	+51,039656	+27,931255	70
244 0707,0	+51,685196	-23,745731	-10,977924	70	244 0742,0	+12,540629	+52,942003	+28,688805	70
244 0707,5	+54,544096	-17,981699	- 7,783773	70	244 0742,5	+ 5,867667	+54,192475	+29,091865	70
244 0708,0	+56,591877	-11,944933	- 4,471555	70	244 0743,0	- 0,874442	+54,784415	+29,140222	70
244 0708,5	+57,801197	- 5,725451	- 1,090663	70	244 0743,5	- 7,602661	+54,719056	+28,837855	70
244 0709,0	+58,158440	+ 0,584359	+ 2,308728	70	244 0744,0	-14,236221	+54,005115	+28,192656	70
244 0709,5	+57,664016	+ 6,891517	+ 5,676627	70	244 0744,5	-20,697385	+52,658301	+27,216144	70
244 0710,0	+56,332055	+13,104254	+ 8,964183	70	244 0745,0	-26,911999	+50,700691	+25,923119	70
244 0710,5	+54,189916	+19,133759	+12,124618	70	244 0745,5	-32,810020	+48,160294	+24,331388	70
244 0711,0	+51,277321	+24,895812	+15,114062	70	244 0746,0	-38,325834	+45,070454	+22,461458	70
244 0711,5	+47,645169	+30,312207	+17,892285	70	244 0746,5	-43,398562	+41,469409	+20,362621	70
244 0712,0	+43,354217	+35,312026	+20,423333	70	244 0747,0	-47,972297	+37,399862	+17,980922	70
244 0712,5	+38,473409	+39,832519	+22,675945	70	244 0747,5	-51,996216	+32,908556	+15,422539	70
244 0713,0	+33,078337	+43,819877	+24,623904	70	244 0748,0	-55,424810	+28,045993	+12,689990	70
244 0713,5	+27,249475	+47,229519	+26,246146	70	244 0748,5	-58,217990	+22,866116	+ 9,813803	70
244 0714,0	+21,070624	+50,026272	+27,526779	70	244 0749,0	-60,341312	+17,426090	+ 6,825975	70
244 0714,5	+14,627386	+52,184284	+28,455001	70	244 0749,5	-61,766137	+11,786053	+ 3,759881	70
244 0715,0	+ 8,005818	+53,686673	+29,024854	70	244 0750,0	-62,469995	+ 6,008956	+ 0,650127	70
244 0715,5	+1,291253	+54,525141	+29,234974	70	244 0750,5	-62,436869	+ 0,160317	- 2,467558	70
244 0716,0	- 5,432669	+54,699422	+29,088260	70	244 0751,0	-61,657584	- 5,692002	- 5,556494	70
244 0716,5	-12,084802	+54,216676	+28,591528	70	244 0751,5	-60,130413	-11,478107	- 8,579213	70
244 0717,0	-18,587125	+53,090988	+27,755196	70	244 0752,0	-57,861519	-17,126462	-11,497707	70
244 0717,5	-24,865196	+51,342643	+26,592896	70	244 0752,5	-54,865623	-22,564397	-14,273731	70
244 0718,0	-30,848514	+48,997713	+25,121234	70	244 0753,0	-51,166616	-27,718798	-16,869183	70
244 0718,5	-36,470806	+46,087563	+23,359508	70	244 0753,5	-46,798108	-32,516909	-19,246568	70
244 0719,0	-41,670149	+42,648344	+21,329427	70	244 0754,0	-41,803949	-36,887378	-21,369584	70
244 0719,5	-46,389227	+38,720776	+19,054998	70	244 0754,5	-36,238658	-40,761528	-23,203802	70
244 0720,0	-50,575413	+34,349772	+16,562302	70	244 0755,0	-30,167520	-44,074755	-24,717442	70
244 0720,5	-54,180977	+29,584243	+13,879382	70	244 0755,5	-23,666421	-46,768130	-25,882199	70
244 0721,0	-57,163278	+24,476902	+11,036145	70	244 0756,0	-16,821342	-48,790094	-26,674145	70
244 0721,5	-59,485049	+19,084101	+ 8,064244	70	244 0756,5	- 9,727411	-50,098244	-27,074631	70
244 0722,0	-61,114725	+13,465683	+ 4,996981	70	244 0757,0	- 2,487441	-50,660886	-27,071062	70
244 0722,5	-62,026836	+ 7,684772	+ 1,869202	70	244 0757,5	+ 4,789924	-50,458576	-26,657631	70
244 0723,0	-62,202507	+ 1,807597	+1,282847	70	244 0758,0	+11,992497	-49,485228	-25,835830	70
244 0723,5	-61,630034	- 0,496837	- 4,421704	70	244 0758,5	+19,007163	-47,748821	-26,614704	70
244 0724,0	-60,305415	- 9,957132	- 7,508912	70	244 0759,0	+25,722620	-45,271661	-23,010877	70
244 0724,5	-58,233099	-15,699995	-10,505340	70	244 0759,5	+32,032191	-42,090050	-21,048263	70
244 0725,0	-55,426528	-21,250931	-13,371540	70	244 0760,0	+37,836482	-38,253496	-18,757520	70
244 0725,5	-51,908837	-26,535061	-16,068250	70	244 0760,5	+43,045671	-33,823357	-16,175242	70
244 0726,0	-47,713285	-31,478128	-18,556922	70	244 0761,0	+47,581527	-28,871268	-13,343015	70

RECTANGULAR COORDINATES OF THE MOON 1952-1971

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J.D.	x	y	z	J.D.	x	y	z		
244 0761,5	+51,378870	-23,477167	-10,306313	70	244 0786,5	+26,679574	-44,333038	-22,417415	71
244 0762,0	+54,386500	-17,727228	- 7,113357	70	244 0787,0	+32,912340	-40,912983	-20,304994	71
244 0762,5	+56,567672	-11,711795	- 3,813972	70	244 0787,5	+38,613531	-36,835355	-17,865629	71
244 0763,0	+57,900194	- 5,523356	- 0,458522	70	244 0788,0	+43,689494	-32,165659	-15,138624	71
244 0763,5	+58,376012	+ 0,745338	+ 2,903092	70	244 0788,5	+48,059098	-26,980987	-12,168916	71
244 0764,0	+58,000565	+ 7,002949	+ 6,222301	70	244 0789,0	+51,655806	-21,367854	- 9,005804	71
244 0764,5	+56,791976	+13,161037	+ 9,452624	70	244 0789,5	+54,428996	-15,419637	- 5,701534	71
244 0765,0	+54,779945	+19,135301	+12,550285	70	244 0790,0	+56,344533	- 9,233911	- 2,309842	71
244 0765,5	+52,004748	+24,846661	+15,474747	70	244 0790,5	+57,384798	- 2,909896	+ 1,115412	71
244 0766,0	+48,515940	+30,222071	+18,189101	70	244 0791,0	+57,548095	+ 3,453929	+ 4,521496	71
244 0766,5	+44,371220	+35,195228	+20,660392	70	244 0791,5	+56,847506	+ 9,761919	+ 7,857873	71
244 0767,0	+39,635287	+39,707117	+22,859863	70	244 0792,0	+55,309619	+15,922988	+11,077053	71
244 0767,5	+34,378539	+43,706331	+24,763068	70	244 0792,5	+52,972908	+21,851959	+14,135259	71
244 0768,0	+28,676032	+47,149415	+26,350027	70	244 0793,0	+49,886129	+27,470582	+16,992888	71
244 0768,5	+22,606324	+50,000977	+27,605217	70	244 0793,5	+46,106694	+32,708224	+19,614806	71
244 0769,0	+16,250376	+52,233760	+28,517575	70	244 0794,0	+41,699124	+37,502309	+21,970517	71
244 0769,5	+ 9,690541	+53,828582	+29,080419	70	244 0794,5	+36,733683	+41,798584	+24,034242	71
244 0770,0	+ 3,009572	+54,774248	+29,291361	70	244 0795,0	+31,284951	+45,551089	+25,784833	71
244 0770,5	- 3,710312	+55,067282	+29,152121	70	244 0795,5	+25,430783	+48,722241	+27,205779	71
244 0771,0	-10,388264	+54,711664	+28,668354	70	244 0796,0	+19,251151	+51,282559	+28,285005	71
244 0771,5	-16,945596	+53,718532	+27,849453	70	244 0796,5	+12,827274	+53,210578	+29,014781	71
244 0772,0	-23,306480	+52,105695	+26,708267	70	244 0797,0	+ 6,240737	+54,492583	+29,391552	71
244 0772,5	-29,398575	+49,897318	+25,260884	70	244 0797,5	- 0,427288	+55,122354	+29,415743	71
Epoch 1971.0					244 0798,0	- 7,096713	+55,100896	+29,091615	71
244 0764,0	+57,998394	+ 7,015913	+ 6,227936	71	244 0798,5	-13,689236	+54,436137	+28,427039	71
244 0764,5	+56,788114	+13,173730	+ 9,458142	71	244 0799,0	-20,128923	+53,142674	+27,433364	71
244 0765,0	+54,774447	+19,147544	+12,555606	71	244 0799,5	-26,342766	+51,241305	+26,125111	71
244 0765,5	+51,997689	+24,858284	+15,479799	71	244 0800,0	-32,261252	+48,758855	+24,519883	71
244 0766,0	+48,507416	+30,232914	+18,193814	71	244 0800,5	-37,818790	+45,727631	+22,638022	71
244 0766,5	+44,361345	+35,205144	+20,664703	71	244 0801,0	-42,954204	+42,185156	+20,502471	71
244 0767,0	+39,624190	+39,715975	+22,863713	71	244 0801,5	-47,611107	+38,173720	+18,138495	71
244 0767,5	+34,366363	+43,714014	+24,766407	71	244 0802,0	-51,738279	+33,739974	+15,573460	71
244 0768,0	+28,662933	+47,115823	+26,352812	71	244 0802,5	-55,290006	+28,934511	+12,836593	71
244 0768,5	+22,592466	+50,006028	+27,607412	71	244 0803,0	-58,226286	+23,811417	+ 9,958717	71
244 0769,0	+16,235930	+52,237391	+28,519153	71	244 0803,5	-60,513152	+18,427878	+ 6,972048	71
244 0769,5	+ 9,675685	+53,830747	+29,081359	71	244 0804,0	-62,122872	+12,843760	+ 3,909939	71
244 0770,0	+ 2,994484	+54,774919	+29,291652	71	244 0804,5	-63,034001	+ 7,121171	+ 0,806652	71
244 0770,5	- 3,725452	+55,066451	+29,151759	71	244 0805,0	-63,231805	+1,324124	+ 2,302841	71
244 0771,0	-10,403278	+54,709340	+28,667343	71	244 0805,5	-62,708215	+ 4,481875	+ 5,383092	71
244 0771,5	-16,960308	+53,714742	+27,847806	71	244 0806,0	-61,462164	-10,230230	- 8,398387	71
244 0772,0	-23,320721	+52,100485	+26,706002	71	244 0806,5	-59,499725	-15,853629	-11,312973	71
244 0772,5	-29,412181	+49,890746	+25,258027	71	244 0807,0	-56,834301	-21,284460	-14,091283	71
244 0773,0	-35,166339	+47,115468	+23,522896	71	244 0807,5	-53,486987	-26,455282	-16,698198	71
244 0773,5	-40,519332	+43,810001	+21,522323	71	244 0808,0	-49,486735	-31,299335	-19,099340	71
244 0774,0	-45,412103	+40,014557	+19,280422	71	244 0808,5	-44,870667	-35,751085	-21,261377	71
244 0774,5	-49,790748	+35,773793	+16,823449	71	244 0809,0	-39,684357	-39,746959	-23,152419	71
244 0775,0	-53,606731	+31,136349	+14,179579	71	244 0809,5	-33,982074	-43,226100	-24,742452	71
244 0775,5	-56,817085	+26,154438	+11,378649	71	244 0810,0	-27,826976	-46,131354	-26,003865	71
244 0776,0	-59,384622	+20,883505	+ 8,451968	71	244 0810,5	-21,291177	-48,410352	-26,912044	71
244 0776,5	-61,278092	+15,381865	+ 5,432127	71	244 0811,0	-14,455615	-50,016780	-27,446030	71
244 0777,0	-62,472281	+ 9,710384	+ 2,352811	71	244 0811,5	- 7,409698	-50,911781	-27,589265	71
244 0777,5	-62,948375	+ 3,932214	+ 0,751353	71	244 0812,0	- 0,250595	-51,065437	-27,330355	71
244 0778,0	-62,694010	- 1,887513	- 3,844967	71	244 0812,5	+ 6,917859	-50,458377	-26,663862	71
244 0778,5	-61,703673	- 7,681954	- 6,892032	71	244 0813,0	+13,986728	-49,083225	-25,591019	71
244 0779,0	-59,978969	-13,382880	- 9,856112	71	244 0813,5	+20,844017	-46,945985	-24,120371	71
244 0779,5	-57,529015	-18,921007	-12,700554	71	244 0814,0	+27,377190	-44,067023	-22,268183	71
244 0780,0	-54,370912	-24,226455	-15,388749	71	244 0814,5	+33,476072	-40,481685	-20,058616	71
244 0780,5	-50,530188	-29,229256	-17,884419	71	244 0815,0	+39,035999	-36,240252	-17,523579	71
244 0781,0	-46,041312	-33,860029	-20,152015	71	244 0815,5	+43,961046	-31,407299	-14,702210	71
244 0781,5	-40,948132	-38,050776	-22,157156	71	244 0816,0	+48,167042	-26,060304	-11,639988	71
244 0782,0	-35,304355	-41,735947	-23,867216	71	244 0816,5	+51,584170	-20,287632	- 8,387544	71
244 0782,5	-29,173757	-44,853565	-25,251958	71	244 0817,0	+54,159016	-14,186032	- 4,999223	71
244 0783,0	-22,630284	-47,346665	-26,284276	71	244 0817,5	+55,855808	- 7,857747	-1,531460	71
244 0783,5	-15,757841	-49,164857	-26,941056	71	244 0818,0	+56,656782	-14,07522	+1,958821	71
244 0784,0	- 8,649709	-50,266042	-27,204033	71	244 0818,5	+56,561893	+ 5,060291	+ 5,415756	71
244 0784,5	-14,07485	-50,618148	-27,060696	71	244 0819,0	+55,587781	+11,444398	+ 8,785905	71
244 0785,0	+ 5,860453	-50,200779	-26,505098	71	244 0819,5	+53,766148	+17,648780	+12,019380	71
244 0785,5	+13,041012	-49,006812	-25,538591	71	244 0820,0	+51,141871	+23,584468	+15,070704	71
244 0786,0	+20,018907	-47,043476	-24,170314	71	244 0820,5	+47,770912	+29,170833	+17,899375	71
					244 0821,0	+43,718225	+34,336401	+20,470239	71

J.D.	x	y	z		J.D.	x	y	z	
244 0821,5	+39,055692	+39,019252	+22,753583	71	244 0856,5	-51,576836	+33,832533	+15,605888	71
244 0822,0	+33,860366	+43,167189	+24,725135	71	244 0857,0	-55,133773	+29,040234	+12,879259	71
244 0822,5	+28,212724	+46,737470	+26,365868	71	244 0857,5	-58,077774	+23,918216	+10,006409	71
244 0823,0	+22,195424	+49,696650	+27,661818	71	244 0858,0	-60,375228	+18,523998	+7,019670	71
244 0823,5	+15,892004	+52,020046	+28,603773	71	244 0858,5	-61,998720	+12,918058	+3,952651	71
244 0824,0	+9,385999	+53,691336	+29,186981	71	244 0859,0	-62,927315	+7,163442	+0,840000	71
244 0824,5	+2,760099	+54,702074	+29,410890	71	244 0859,5	-63,146845	+1,325323	-2,282828	71
244 0825,0	-3,904511	+55,051233	+29,278834	71	244 0860,0	-62,650278	-4,529463	-5,379842	71
244 0825,5	-10,528689	+54,744707	+28,977762	71	244 0860,5	-61,438025	-10,332954	-8,414832	71
244 0826,0	-17,035829	+53,794966	+27,978019	71	244 0861,0	-59,518073	-16,016646	-11,351667	71
244 0826,5	-23,352291	+52,220675	+26,833140	71	244 0861,5	-56,906285	-21,512129	-14,154652	71
244 0827,0	-29,407777	+50,046303	+25,379586	71	244 0862,0	-53,626487	-26,751758	-16,788899	71
244 0827,5	-35,135725	+47,301827	+23,636609	71	244 0862,5	-49,710476	-31,669352	-19,220707	71
244 0828,0	-40,473665	+44,022391	+21,626014	71	244 0863,0	-45,198081	-36,200972	-21,417954	71
244 0828,5	-45,363571	+40,247985	+19,371995	71	244 0863,5	-40,137015	-40,285679	-23,350517	71
244 0829,0	-49,752208	+36,023103	+16,900930	71	244 0864,0	-34,582682	-43,866313	-24,990667	71
244 0829,5	-53,591532	+31,396453	+14,241190	71	244 0864,5	-28,597882	-46,890271	-26,313464	71
244 0830,0	-56,838937	+26,420519	+11,422922	71	244 0865,0	-22,252501	-49,310381	-27,297218	71
244 0830,5	-59,457671	+21,151258	+8,477840	71	244 0865,5	-15,622969	-51,085654	-27,923846	71
244 0831,0	-61,417083	+15,647645	+5,438977	71	244 0866,0	-8,791722	-52,182124	-28,179312	71
244 0831,5	-62,692990	+9,971263	+2,340461	71	244 0866,5	-1,846494	-52,573699	-28,054031	71
244 0832,0	-63,267805	+4,185831	-0,782756	71	244 0867,0	+5,120527	-52,242892	-27,543214	71
244 0832,5	-63,130888	-1,643238	-3,895165	71	244 0867,5	+12,013689	-51,181747	-26,647325	71
244 0833,0	-62,278660	-7,449356	-6,960946	71	244 0868,0	+18,735077	-49,392462	-25,372338	71
244 0833,5	-60,714808	-13,165229	-9,944278	71	244 0868,5	+25,185853	-46,888061	-23,730036	71
244 0834,0	-58,450468	-18,723411	-12,809599	71	244 0869,0	+31,267901	-43,693040	-21,738267	71
244 0834,5	-55,504266	-24,056807	-15,521919	71	244 0869,5	+36,885593	-39,843613	-19,420995	71
244 0835,0	-51,902528	-29,099278	-18,047114	71	244 0870,0	+41,947794	-35,387886	-16,808277	71
244 0835,5	-47,679257	-33,786183	-20,352247	71	244 0870,5	+46,370004	-30,385658	-13,936077	71
244 0836,0	-42,876291	-38,055070	-22,405928	71	244 0871,0	+50,076613	-24,907874	-10,845835	71
244 0836,5	-37,543240	-41,846289	-24,178635	71	244 0871,5	+53,003058	-19,035612	-7,583843	71
244 0837,0	-31,737510	-45,103739	-25,643133	71	244 0872,0	+55,097884	-12,858668	-4,200382	71
244 0837,5	-25,524249	-47,775707	-26,774897	71	244 0872,5	+56,324483	-6,473677	-0,748640	71
244 0838,0	-18,976164	-49,815695	-27,552562	71	244 0873,0	+56,662371	+0,018119	+2,716549	71
244 0838,5	-12,173275	-51,183426	-27,958451	71	244 0873,5	+56,107961	+6,513375	+6,140050	71
244 0839,0	-5,202478	-51,845939	-27,979121	71	244 0874,0	+54,674673	+12,909289	+9,467866	71
244 0839,5	+1,843086	-51,778627	-27,605908	71	244 0874,5	+52,392315	+19,106210	+12,648476	71
244 0840,0	+8,864937	-50,966530	-26,835561	71	244 0875,0	+49,305938	+25,010065	+15,634078	71
244 0840,5	+15,760464	-49,405405	-25,670756	71	244 0875,5	+45,474131	+30,534449	+18,381623	71
244 0841,0	+22,424497	-47,102911	-24,120663	71	244 0876,0	+40,966911	+35,602294	+20,853582	71
244 0841,5	+28,751249	-44,079488	-22,201308	71	244 0876,5	+35,863423	+40,147049	+23,018482	71
244 0842,0	+34,636587	-40,369031	-19,935836	71	244 0877,0	+30,249517	+44,113358	+24,851126	71
244 0842,5	+39,980677	-36,019216	-17,354546	71	244 0877,5	+24,215496	+47,457300	+26,332632	71
244 0843,0	+44,690784	-31,091248	-14,494637	71	244 0878,0	+17,853959	+50,146228	+27,450221	71
244 0843,5	+48,684097	-25,659080	-11,399631	71	244 0878,5	+11,257965	+52,158289	+28,196884	71
244 0844,0	+51,890479	-19,808030	-8,118520	71	244 0879,0	+4,519489	+53,481747	+28,570942	71
244 0844,5	+54,254806	-13,632775	-4,704573	71	244 0879,5	-2,271814	+54,114185	+28,575557	71
244 0845,0	+55,738807	-7,234869	-1,213923	71	244 0880,0	-9,029540	+54,061678	+28,218248	71
244 0845,5	+56,322086	-0,719882	+2,296017	71	244 0880,5	-15,671242	+53,337866	+27,510374	71
244 0846,0	+56,002501	+5,805570	+5,768148	71	244 0881,0	-22,118896	+51,963216	+26,466696	71
244 0846,5	+54,795644	+12,236775	+9,147248	71	244 0881,5	-28,299223	+49,964291	+25,104986	71
244 0847,0	+52,733648	+18,473612	+12,381348	71	244 0882,0	-34,143903	+47,373090	+23,445664	71
244 0847,5	+49,863369	+24,422828	+15,422869	71	244 0882,5	-39,589686	+44,226521	+21,511498	71
244 0848,0	+46,244327	+29,999851	+18,229485	71	244 0883,0	-44,578475	+40,565901	+19,327354	71
244 0848,5	+41,946201	+35,129992	+20,764639	71	244 0883,5	-49,057434	+36,436635	+16,919990	71
244 0849,0	+37,046575	+39,749233	+22,997879	71	244 0884,0	-52,979051	+31,887838	+14,317882	71
244 0849,5	+31,628538	+43,804431	+24,904821	71	244 0884,5	-56,301256	+26,972074	+11,551040	71
244 0850,0	+25,778725	+47,253274	+26,467051	71	244 0885,0	-58,987640	+21,745122	+8,650911	71
244 0850,5	+19,585462	+50,063845	+27,671790	71	244 0885,5	-61,007552	+16,265693	+5,650194	71
244 0851,0	+13,137345	+52,214105	+28,511556	71	244 0886,0	-62,336509	+10,595226	+2,582718	71
244 0851,5	+6,521992	+53,691128	+28,983694	71	244 0886,5	-62,956426	+4,797566	-0,516739	71
244 0852,0	-0,174847	+54,490484	+29,089997	71	244 0887,0	-62,855957	-1,061370	-3,612646	71
244 0852,5	-6,870015	+54,615515	+28,836295	71	244 0887,5	-62,030906	-6,913991	-6,668957	71
244 0853,0	-13,483481	+54,076627	+28,232035	71	244 0888,0	-60,484547	-12,691508	-9,649378	71
244 0853,5	-19,938753	+52,890729	+27,289975	71	244 0888,5	-58,228013	-18,324522	-12,517699	71
244 0854,0	-26,163165	+51,080681	+26,025870	71	244 0889,0	-55,280561	-23,743664	-15,238137	71
244 0854,5	-32,088146	+48,674873	+24,458219	71	244 0889,5	-51,669885	-28,880357	-17,775781	71
244 0855,0	-37,649393	+45,706738	+22,608019	71	244 0890,0	-47,432163	-33,667642	-20,097002	71
244 0855,5	-42,787153	+42,214527	+20,498604	71	244 0890,5	-42,612140	-38,041102	-22,169969	71
244 0856,0	-47,446337	+38,240860	+18,155416	71	244 0891,0	-37,262961	-41,939764	-23,965107	71

RECTANGULAR COORDINATES OF THE MOON 1952-1971 103

J.D.	x	y	z	J.D.	x	y	z
244 0891,5	-31,445946	-45,307172	-25,455654	244 0926,5	+56,147440	-14,169410	-4,354197
244 0892,0	-25,230095	-48,092299	-26,618124	244 0927,0	+57,546455	-7,988624	-1,036408
244 0892,5	-18,691505	-50,250594	-27,432828	244 0927,5	+58,091512	-1,687440	+2,297545
244 0893,0	-11,912545	-51,744821	-27,884264	244 0928,0	+57,777283	+4,641849	+5,598833
244 0893,5	-4,980961	-52,546002	-27,961593	244 0928,5	+56,611920	+10,907083	+8,819447
244 0894,0	+2,011245	-52,634108	-27,658914	244 0929,0	+54,616773	+17,017835	+11,913017
244 0894,5	+8,969025	-51,998716	-26,975590	244 0929,5	+51,825877	+22,886958	+14,835613
244 0895,0	+15,795599	-50,639569	-25,916438	244 0930,0	+48,285245	+28,432096	+17,546485
244 0895,5	+22,393903	-48,566913	-24,491849	244 0930,5	+44,051767	+33,576999	+20,008710
244 0896,0	+28,668090	-45,801762	-22,717857	244 0931,0	+39,192091	+38,252798	+22,189784
244 0896,5	+34,525091	-42,375921	-20,616055	244 0931,5	+33,781182	+42,399011	+24,062094
244 0897,0	+39,876265	-38,331897	-18,213458	244 0932,0	+27,900750	+45,964351	+25,603231
244 0897,5	+44,639001	-33,722545	-15,542256	244 0932,5	+21,637626	+48,907312	+26,796220
244 0898,0	+48,738389	-28,610565	-12,639430	244 0933,0	+15,082068	+51,196466	+27,629579
244 0898,5	+52,108815	-23,067726	-9,546293	244 0933,5	+8,326130	+52,810576	+28,097302
244 0899,0	+54,695459	-17,173848	-6,307836	244 0934,0	+1,462059	+53,738417	+28,198646
244 0899,5	+56,455714	-11,015553	-2,972023	244 0934,5	-5,419150	+53,978352	+27,937860
244 0900,0	+57,360334	-4,684742	+0,411085	244 0935,0	-12,229020	+53,537865	+27,323847
244 0900,5	+57,394357	+1,723135	+3,790292	244 0935,5	-18,882714	+52,432832	+26,369731
244 0901,0	+56,557600	+8,111004	+7,114319	244 0936,0	-25,299904	+50,686803	+25,092415
244 0901,5	+54,864960	+14,382223	+10,332886	244 0936,5	-31,405458	+48,330128	+23,512103
244 0902,0	+52,344527	+20,442626	+13,397782	244 0937,0	-37,129979	+45,399275	+21,651896
244 0902,5	+49,044075	+26,202612	+16,263945	244 0937,5	-42,410094	+41,935909	+19,537284
244 0903,0	+45,015718	+31,578959	+18,890339	244 0938,0	-47,188695	+37,986275	+17,195833
244 0903,5	+40,328478	+36,496516	+21,240782	244 0938,5	-51,415060	+33,600521	+14,656798
244 0904,0	+35,059429	+40,889507	+23,284531	244 0939,0	-55,044794	+28,832077	+11,950806
244 0904,5	+29,293043	+44,702466	+24,996682	244 0939,5	-58,039911	+23,737225	+9,109623
244 0905,0	+23,119147	+47,890860	+26,358389	244 0940,0	-60,368732	+18,374641	+6,165921
244 0905,5	+16,630789	+50,421207	+27,356803	244 0940,5	-62,005900	+12,805074	+3,153101
244 0906,0	+9,922359	+52,271005	+27,984964	244 0941,0	-62,932344	+7,091019	+0,105123
244 0906,5	+3,087815	+53,428263	+28,241437	244 0941,5	-63,135411	+1,296496	-2,943613
244 0907,0	-3,780802	+53,890905	+28,129931	244 0942,0	-62,608931	-4,513223	-5,958421
244 0907,5	-10,594602	+53,665895	+27,658773	244 0942,5	-61,353397	-10,271847	-8,904467
244 0908,0	-17,268788	+52,768495	+26,840466	244 0943,0	-59,376212	-15,912339	-11,746934
244 0908,5	-23,723361	+51,221270	+25,691125	244 0943,5	-56,692089	-21,367277	-14,451219
244 0909,0	-29,883620	+49,053299	+24,230030	244 0944,0	-53,323227	-26,569226	-16,983155
244 0909,5	-35,680482	+46,299406	+22,479211	244 0944,5	-49,299854	-31,451291	-19,309330
244 0910,0	-41,050609	+42,999335	+20,462995	244 0945,0	-44,660548	-35,947775	-21,397453
244 0910,5	-45,936559	+39,197253	+18,207737	244 0945,5	-39,452523	-39,994940	-23,216774
244 0911,0	-50,286739	+34,941149	+15,741508	244 0946,0	-33,731953	-43,532018	-24,738635
244 0911,5	-54,055467	+30,282434	+13,093873	244 0946,5	-27,563992	-46,502275	-25,937025
244 0912,0	-57,202923	+25,275549	+10,295685	244 0947,0	-21,022685	-48,854311	-26,789260
244 0912,5	-59,695212	+19,977704	+7,378946	244 0947,5	-14,190563	-50,543410	-27,276674
244 0913,0	-61,504433	+14,448591	+4,376645	244 0948,0	-7,157901	-51,532929	-27,385299
244 0913,5	-62,608847	+8,750181	+1,322641	244 0948,5	-0,021671	-51,795773	-27,106581
244 0914,0	-62,992994	+2,846469	-1,748477	244 0949,0	+7,115979	-51,315609	-26,437925
244 0914,5	-62,648008	-2,996760	-4,801540	244 0949,5	+14,149516	-50,088045	-25,383208
244 0915,0	-61,571994	-8,712230	-7,800972	244 0950,0	+20,972190	-48,121365	-23,953050
244 0915,5	-59,770239	-14,431530	-10,710995	244 0950,5	+27,478371	-45,436962	-22,164884
244 0916,0	-57,255766	-19,985587	-13,495902	244 0951,0	+33,566047	-42,069368	-20,042836
244 0916,5	-54,049683	-25,305213	-16,120374	244 0951,5	+39,139287	-38,065781	-17,617334
244 0917,0	-50,181460	-30,321781	-18,549854	244 0952,0	+44,110506	-33,485122	-14,924464
244 0917,5	-45,689404	-34,968079	-20,751013	244 0952,5	+48,402506	-28,396761	-12,005198
244 0918,0	-40,620695	-39,179201	-22,692223	244 0953,0	+51,950191	-22,878926	-8,904445
244 0918,5	-35,031532	-42,893664	-24,344166	244 0953,5	+54,701689	-17,016799	-5,669996
244 0919,0	-28,986895	-46,054480	-25,680375	244 0954,0	+56,619251	-10,900624	-2,351465
244 0919,5	-22,560236	-48,610488	-26,677913	244 0954,5	+57,679619	-4,623688	+1,000785
244 0920,0	-15,832784	-50,517481	-27,317943	244 0955,0	+57,873852	+1,719608	+4,336648
244 0920,5	-8,892629	-51,739450	-27,586319	244 0955,5	+57,207117	+8,035545	+7,607214
244 0921,0	-1,833549	-52,249697	-27,474108	244 0956,0	+55,697882	+14,232741	+10,765578
244 0921,5	+5,246449	-52,031709	-26,977981	244 0956,5	+53,377180	+20,223636	+13,767589
244 0922,0	+12,246758	-51,079978	-26,100544	244 0957,0	+50,287406	+25,925734	+16,572432
244 0922,5	+19,065980	-49,400413	-24,850460	244 0957,5	+46,481283	+31,262724	+19,143142
244 0923,0	+25,603837	-47,010643	-23,242498	244 0958,0	+42,020568	+36,165360	+21,447017
244 0923,5	+31,763064	-43,939860	-21,297351	244 0958,5	+36,974810	+40,572232	+23,455919
244 0924,0	+37,451287	-40,228505	-19,041366	244 0959,0	+31,419960	+44,430290	+25,146497
244 0924,5	+42,582820	-35,927666	-16,506129	244 0959,5	+25,437101	+47,695280	+26,500321
244 0925,0	+47,080264	-31,098181	-13,727899	244 0960,0	+19,111117	+50,332034	+27,503973
244 0925,5	+50,875988	-25,809621	-10,746989	244 0960,5	+12,529352	+52,314567	+28,148996
244 0926,0	+53,913282	-20,138987	-7,607028	244 0961,0	+5,780368	+53,626072	+28,431842

J.D.	x	y	z	J.D.	x	y	z		
244 0961,5	- 1,047275	+54,258814	+28,353722	71	244 0996,5	-63,284849	- 3,039016	- 5,516135	71
244 0962,0	- 7,866195	+54,213805	+27,920385	71	244 0997,0	-62,325091	- 8,810069	- 8,487823	71
244 0962,5	-14,591242	+53,500480	+27,141872	71	244 0997,5	-60,663646	-14,475331	-11,360455	71
244 0963,0	-21,140465	+52,136200	+26,032205	71	244 0998,0	-58,314703	-19,969899	-14,100814	71
244 0963,5	-27,435970	+50,145645	+24,609014	71	244 0998,5	-55,299203	-25,229691	-16,676539	71
244 0964,0	-33,404656	+47,560276	+22,893205	71	244 0999,0	-51,644870	-30,191823	-19,056319	71
244 0964,5	-38,978775	+44,417570	+20,908535	71	244 0999,5	-47,386283	-34,795023	-21,210113	71
244 0965,0	-44,096435	+40,760379	+18,681232	71	244 1000,0	-42,564944	-38,980068	-23,109396	71
244 0965,5	-48,701929	+36,636266	+16,239639	71	244 1000,5	-37,229344	-42,690257	-24,727399	71
244 0966,0	-52,745990	+32,096804	+13,613817	71	244 1001,0	-31,435139	-45,872062	-26,039467	71
244 0966,5	-56,185921	+27,196971	+10,835233	71	244 1001,5	-25,245139	-48,475736	-27,023375	71
244 0967,0	-58,985634	+21,994533	+ 7,936426	71	244 1002,0	-18,729377	-50,456130	-27,659773	71
244 0967,5	-61,115714	+16,549573	+ 4,950746	71	244 1002,5	-11,965027	-51,773649	-27,932668	71
244 0968,0	-62,553409	+10,923995	+ 1,912107	71	244 1003,0	- 5,036149	-52,395242	-27,829922	71
244 0968,5	-63,282542	+ 5,181106	- 1,145231	71	244 1003,5	+ 1,966715	-52,295634	-27,343900	71
244 0969,0	-63,293551	- 0,614734	- 4,186865	71	244 1004,0	+ 8,947299	-51,458597	-26,472066	71
244 0969,5	-62,583400	- 6,398447	- 7,178399	71	244 1004,5	+15,804677	-49,878213	-25,217576	71
244 0970,0	-61,155768	-12,104534	-10,085621	71	244 1005,0	+22,434729	-47,560135	-23,589874	71
244 0970,5	-59,020987	-17,667376	-12,874662	71	244 1005,5	+28,732076	-44,522798	-21,605182	71
244 0971,0	-56,196242	-23,021513	-15,512159	71	244 1006,0	+34,592367	-40,798151	-19,286757	71
244 0971,5	-52,705812	-28,102037	-17,965459	71	244 1006,5	+39,915004	-36,432185	-16,664996	71
244 0972,0	-48,581241	-32,844939	-20,202836	71	244 1007,0	+44,606029	-31,484796	-13,777189	71
244 0972,5	-43,861689	-37,187665	-22,193786	71	244 1007,5	+48,581165	-26,029116	-10,666966	71
244 0973,0	-38,594105	-41,069644	-23,909336	71	244 1008,0	+51,768656	-20,150144	- 7,383408	71
244 0973,5	-32,833600	-44,433090	-25,322471	71	244 1008,5	+54,111764	-13,942732	- 3,979835	71
244 0974,0	-26,643582	-47,223859	-26,408607	71	244 1009,0	+55,570751	- 7,509080	- 0,512359	71
244 0974,5	-20,095820	-49,392478	-27,146123	71	244 1009,5	+56,123963	- 0,955786	+ 2,961719	71
244 0975,0	-13,270367	-50,895432	-27,517049	71	244 1010,0	+55,768311	+ 5,609213	+ 6,385551	71
244 0975,5	- 6,255139	-51,696393	-27,507671	71	244 1010,5	+54,518699	+12,079656	+ 9,704298	71
244 0976,0	+ 0,854751	-51,767792	-27,109317	71	244 1011,0	+52,406896	+18,353744	+12,866500	71
244 0976,5	+ 7,958119	-51,092188	-26,319018	71	244 1011,5	+49,479720	+24,336459	+15,825203	71
244 0977,0	+14,949236	-49,663727	-25,140177	71	244 1012,0	+45,796889	+29,941386	+18,538772	71
244 0977,5	+21,719816	-47,489337	-23,583074	71	244 1012,5	+41,428718	+35,092068	+20,971456	71
244 0978,0	+28,161391	-44,589574	-21,665158	71	244 1013,0	+36,453684	+39,722736	+23,093628	71
244 0978,5	+34,168024	-40,999172	-19,411180	71	244 1013,5	+30,956168	+43,778643	+24,881817	71
244 0979,0	+39,639191	-36,766893	-16,852932	71	244 1014,0	+25,024467	+47,216095	+26,318592	71
244 0979,5	+44,482694	-31,954907	-14,028736	71	244 1014,5	+18,748910	+50,002062	+27,392257	71
244 0980,0	+48,617365	-26,637511	-10,982615	71	244 1015,0	+12,220410	+52,113777	+28,096532	71
244 0980,5	+51,975374	-20,899312	- 7,763188	71	244 1015,5	+ 5,529143	+53,538099	+28,430153	71
244 0981,0	+54,504079	-14,833003	- 4,422389	71	244 1016,0	- 1,236458	+54,270851	+28,396445	71
244 0981,5	+56,167121	- 8,536811	- 1,014060	71	244 1016,5	- 7,990532	+54,316193	+28,002955	71
244 0982,0	+56,944902	- 2,111877	+ 2,407456	71	244 1017,0	-14,650476	+53,685970	+27,261056	71
244 0982,5	+56,834449	+ 4,340316	+ 5,788648	71	244 1017,5	-21,137459	+52,399027	+26,185557	71
244 0983,0	+55,848647	+10,720333	+ 9,078064	71	244 1018,0	-27,376914	+50,480782	+24,794452	71
244 0983,5	+54,015042	+16,932861	+12,227320	71	244 1018,5	-33,298868	+47,962540	+23,108525	71
244 0984,0	+51,374294	+22,888413	+15,191894	71	244 1019,0	-38,838302	+44,881090	+21,151131	71
244 0984,5	+47,978589	+28,504708	+17,931765	71	244 1019,5	-43,935466	+41,278208	+18,947909	71
244 0985,0	+43,889751	+33,707598	+20,411774	71	244 1020,0	-48,536157	+37,200179	+16,526506	71
244 0985,5	+39,177601	+38,431791	+22,601912	71	244 1020,5	-52,591927	+32,697321	+13,916334	71
244 0986,0	+33,918217	+42,621181	+24,477377	71	244 1021,0	-56,060374	+27,823572	+11,148316	71
244 0986,5	+28,192430	+46,229070	+26,018612	71	244 1021,5	-58,905344	+22,636014	+ 8,254629	71
244 0987,0	+22,084351	+49,218073	+27,211157	71	244 1022,0	-61,097120	+17,194401	+ 5,268451	71
244 0987,5	+15,680156	+51,560077	+28,045550	71	244 1022,5	-62,612625	+11,560707	+ 2,223698	71
244 0988,0	+ 9,066894	+53,235994	+28,517127	71	244 1023,0	-63,435507	+ 5,798616	- 0,845246	71
244 0988,5	+ 2,331454	+54,235405	+28,625779	71	244 1023,5	-63,556290	- 0,026951	- 3,903779	71
244 0989,0	- 4,440372	+54,556254	+28,375717	71	244 1024,0	-62,972463	- 5,850345	- 6,917368	71
244 0989,5	-11,164705	+54,204512	+27,752621	71	244 1024,5	-61,688525	-11,605695	- 9,851801	71
244 0990,0	-17,760381	+53,193695	+26,836517	71	244 1025,0	-59,715891	-17,227402	-12,673444	71
244 0990,5	-24,149618	+51,544419	+25,575134	71	244 1025,5	-57,073012	-22,650645	-15,349524	71
244 0991,0	-30,258667	+49,283996	+24,010013	71	244 1026,0	-53,785237	-27,811883	-17,848360	71
244 0991,5	-36,018390	+46,445882	+22,163006	71	244 1026,5	-49,884768	-32,649344	-20,139639	71
244 0992,0	-41,364734	+43,069150	+20,058613	71	244 1027,0	-45,410552	-37,103505	-22,194657	71
244 0992,5	-46,239188	+39,197959	+17,723654	71	244 1027,5	-40,408257	-41,117666	-23,986606	71
244 0993,0	-50,589144	+34,880982	+15,186968	71	244 1028,0	-34,930060	-44,638383	-25,490792	71
244 0993,5	-54,368207	+30,170869	+12,479090	71	244 1028,5	-29,034580	-47,616087	-26,684960	71
244 0994,0	-57,536444	+25,123664	+ 9,631942	71	244 1029,0	-22,786727	-50,005657	-27,549576	71
244 0994,5	-60,060477	+19,798221	+ 6,678520	71	244 1029,5	-16,257475	-51,767050	-28,068150	71
244 0995,0	-61,913737	+14,255716	+ 3,652610	71	244 1030,0	- 9,523658	-52,866077	-28,227616	71
244 0995,5	-63,076410	+ 8,559073	+ 0,588506	71	244 1030,5	- 2,667587	-53,275131	-28,018696	71
244 0996,0	-63,535497	+ 2,772491	- 2,479257	71	244 1031,0	+ 4,223402	-52,974076	-27,436336	71

J.D.	x	y	z	J.D.	x	y	z		
244 0961,5	- 1,047275	+54,258814	+28,353722	71	244 0996,5	-63,284849	- 3,039016	- 5,516135	71
244 0962,0	- 7,866195	+54,213805	+27,920385	71	244 0997,0	-62,325091	- 8,810069	- 8,487823	71
244 0962,5	-14,591242	+53,500480	+27,141872	71	244 0997,5	-60,663646	-14,475331	-11,360455	71
244 0963,0	-21,140465	+52,136200	+26,032205	71	244 0998,0	-58,314703	-19,969899	-14,100814	71
244 0963,5	-27,435970	+50,145645	+24,609014	71	244 0998,5	-55,299203	-25,229691	-16,676539	71
244 0964,0	-33,404656	+47,560276	+22,893205	71	244 0999,0	-51,644870	-30,191823	-19,056319	71
244 0964,5	-38,978775	+44,417570	+20,908535	71	244 0999,5	-47,386283	-34,795023	-21,210113	71
244 0965,0	-44,096435	+40,760379	+18,681232	71	244 1000,0	-42,564944	-38,980068	-23,109396	71
244 0965,5	-48,701929	+36,636266	+16,239639	71	244 1000,5	-37,229344	-42,690257	-24,727399	71
244 0966,0	-52,745990	+32,096804	+13,613817	71	244 1001,0	-31,435139	-45,872062	-26,039467	71
244 0966,5	-56,185921	+27,196971	+10,835233	71	244 1001,5	-25,245139	-48,475736	-27,023375	71
244 0967,0	-58,985634	+21,994533	+ 7,936426	71	244 1002,0	-18,729377	-50,456130	-27,659773	71
244 0967,5	-61,115714	+16,549573	+ 4,950746	71	244 1002,5	-11,965027	-51,773649	-27,932668	71
244 0968,0	-62,553409	+10,923995	+ 1,912107	71	244 1003,0	- 5,036149	-52,395242	-27,829922	71
244 0968,5	-63,282542	+ 5,181106	- 1,145231	71	244 1003,5	+ 1,966715	-52,295634	-27,343900	71
244 0969,0	-63,293551	- 0,614734	- 4,186865	71	244 1004,0	+ 8,947299	-51,458597	-26,472066	71
244 0969,5	-62,583400	- 6,398447	- 7,178399	71	244 1004,5	+15,804677	-49,878213	-25,217576	71
244 0970,0	-61,155768	-12,104534	-10,085621	71	244 1005,0	+22,434729	-47,560135	-23,589874	71
244 0970,5	-59,020987	-17,667376	-12,874662	71	244 1005,5	+28,732076	-44,522798	-21,605182	71
244 0971,0	-56,196242	-23,021513	-15,512159	71	244 1006,0	+34,592367	-40,798151	-19,286757	71
244 0971,5	-52,705812	-28,102037	-17,965459	71	244 1006,5	+39,915004	-36,432185	-16,664996	71
244 0972,0	-48,581241	-32,844939	-20,202836	71	244 1007,0	+44,606029	-31,484796	-13,777189	71
244 0972,5	-43,861689	-37,187665	-22,193786	71	244 1007,5	+48,581165	-26,029116	-10,666966	71
244 0973,0	-38,594105	-41,069644	-23,909336	71	244 1008,0	+51,768656	-20,150144	- 7,383408	71
244 0973,5	-32,833600	-44,433090	-25,322471	71	244 1008,5	+54,111764	-13,942732	- 3,979835	71
244 0974,0	-26,643582	-47,223859	-26,408607	71	244 1009,0	+55,570751	- 7,509080	- 0,512359	71
244 0974,5	-20,095820	-49,392478	-27,146123	71	244 1009,5	+56,123963	- 0,955786	+ 2,961719	71
244 0975,0	-13,270367	-50,895432	-27,517049	71	244 1010,0	+55,768311	+ 5,609213	+ 6,385551	71
244 0975,5	- 6,255139	-51,696393	-27,507671	71	244 1010,5	+54,518699	+12,079656	+ 9,704298	71
244 0976,0	+ 0,854751	-51,767792	-27,109317	71	244 1011,0	+52,406896	+18,353744	+12,866500	71
244 0976,5	+ 7,958119	-51,092188	-26,319018	71	244 1011,5	+49,479720	+24,336459	+15,825203	71
244 0977,0	+14,949236	-49,663727	-25,140177	71	244 1012,0	+45,796889	+29,941386	+18,538772	71
244 0977,5	+21,719816	-47,489337	-23,583074	71	244 1012,5	+41,428718	+35,092068	+20,971456	71
244 0978,0	+28,161391	-44,589574	-21,665158	71	244 1013,0	+36,453684	+39,722736	+23,093628	71
244 0978,5	+34,168024	-40,999172	-19,411180	71	244 1013,5	+30,956168	+43,778643	+24,881817	71
244 0979,0	+39,639191	-36,766893	-16,852932	71	244 1014,0	+25,024467	+47,216095	+26,318592	71
244 0979,5	+44,482694	-31,954907	-14,028736	71	244 1014,5	+18,748910	+50,002062	+27,392257	71
244 0980,0	+48,617365	-26,637511	-10,982615	71	244 1015,0	+12,220410	+52,113777	+28,096532	71
244 0980,5	+51,975374	-20,899312	- 7,763188	71	244 1015,5	+ 5,529143	+53,538099	+28,430153	71
244 0981,0	+54,504079	-14,833003	- 4,422389	71	244 1016,0	- 1,236458	+54,270851	+28,396445	71
244 0981,5	+56,167121	- 8,536811	- 1,014060	71	244 1016,5	- 7,990532	+54,316193	+28,002955	71
244 0982,0	+56,944902	- 2,111877	+ 2,407456	71	244 1017,0	-14,650476	+53,685970	+27,261056	71
244 0982,5	+56,834449	+ 4,340316	+ 5,788648	71	244 1017,5	-21,137459	+52,399027	+26,185557	71
244 0983,0	+55,848647	+10,720333	+ 9,078064	71	244 1018,0	-27,376914	+50,480782	+24,794452	71
244 0983,5	+54,015042	+16,932861	+12,227320	71	244 1018,5	-33,298868	+47,962540	+23,108525	71
244 0984,0	+51,374294	+22,888413	+15,191894	71	244 1019,0	-38,838302	+44,881090	+21,151131	71
244 0984,5	+47,978589	+28,504708	+17,931765	71	244 1019,5	-43,935466	+41,278208	+18,947909	71
244 0985,0	+43,889751	+33,707598	+20,411774	71	244 1020,0	-48,536157	+37,200179	+16,526506	71
244 0985,5	+39,177601	+38,431791	+22,601912	71	244 1020,5	-52,591927	+32,697321	+13,916334	71
244 0986,0	+33,918217	+42,621181	+24,477377	71	244 1021,0	-56,060374	+27,823572	+11,148316	71
244 0986,5	+28,192430	+46,229070	+26,018612	71	244 1021,5	-58,905344	+22,636014	+ 8,254629	71
244 0987,0	+22,084351	+49,218073	+27,211157	71	244 1022,0	-61,097120	+17,194401	+ 5,268451	71
244 0987,5	+15,680156	+51,560077	+28,045550	71	244 1022,5	-62,612625	+11,560707	+ 2,223698	71
244 0988,0	+ 9,066894	+53,235994	+28,517127	71	244 1023,0	-63,435507	+ 5,798616	- 0,845246	71
244 0988,5	+ 2,331454	+54,235405	+28,625779	71	244 1023,5	-63,556290	+ 0,026951	- 3,903779	71
244 0989,0	- 4,440372	+54,556254	+28,375717	71	244 1024,0	-62,972463	- 5,850345	- 6,917368	71
244 0989,5	-11,164705	+54,204512	+27,775261	71	244 1024,5	-61,688525	-11,605695	- 9,851801	71
244 0990,0	-17,760381	+53,193695	+26,836517	71	244 1025,0	-59,715891	-17,227402	-12,673444	71
244 0990,5	-24,149618	+51,544419	+25,575134	71	244 1025,5	-57,073012	-22,650645	-15,349524	71
244 0991,0	-30,258667	+49,283996	+24,010013	71	244 1026,0	-53,785237	-27,811883	-17,848360	71
244 0991,5	-36,018390	+46,445882	+22,163006	71	244 1026,5	-49,884768	-32,649344	-20,139639	71
244 0992,0	-41,364734	+43,069150	+20,058613	71	244 1027,0	-45,410552	-37,103505	-22,194657	71
244 0992,5	-46,239188	+39,197959	+17,723654	71	244 1027,5	-40,408257	-41,117666	-23,986606	71
244 0993,0	-50,589144	+34,880982	+15,186968	71	244 1028,0	-34,930060	-44,638383	-25,490792	71
244 0993,5	-54,368207	+30,170869	+12,479090	71	244 1028,5	-29,034580	-47,616087	-26,684960	71
244 0994,0	-57,536444	+25,123664	+ 9,631942	71	244 1029,0	-22,786727	-50,005657	-27,549576	71
244 0994,5	-60,060477	+19,798221	+ 6,678520	71	244 1029,5	-16,257475	-51,767050	-28,068150	71
244 0995,0	-61,913737	+14,255716	+ 3,652610	71	244 1030,0	- 9,523658	-52,866077	-28,227616	71
244 0995,5	-63,076410	+ 8,559073	+ 0,588506	71	244 1030,5	- 2,667587	-53,275131	-28,018696	71
244 0996,0	-63,535497	+ 2,772491	- 2,479257	71	244 1031,0	+ 4,223402	-52,974076	-27,436336	71

RECTANGULAR COORDINATES OF THE MOON 1952-1971 105

J.D.	x	y	z	J.D.	x	y	z		
244 1031,5	+11,057607	-51,951192	-26,480145	71	244 1066,5	+48,015078	+25,431560	+16,154061	71
244 1032,0	+17,739812	-50,204075	-25,154829	71	244 1067,0	+43,889749	+30,952487	+18,749268	71
244 1032,5	+24,172438	-47,740692	-23,470657	71	244 1067,5	+39,080371	+35,990533	+21,050845	71
244 1033,0	+30,256965	-44,580228	-21,443813	71	244 1068,0	+33,671137	+40,473767	+23,026920	71
244 1033,5	+35,895700	-40,753873	-19,096699	71	244 1068,5	+27,754626	+44,342476	+24,652488	71
244 1034,0	+40,993920	-36,305428	-16,458120	71	244 1069,0	+21,429104	+47,549838	+25,909597	71
244 1034,5	+45,462189	-31,291410	-13,563189	71	244 1069,5	+14,795880	+50,062055	+26,787246	71
244 1035,0	+49,219037	-25,780927	-10,453098	71	244 1070,0	+7,956890	+51,857970	+27,281026	71
244 1035,5	+52,193620	-19,854860	-7,174521	71	244 1070,5	+1,012628	+52,928361	+27,926268	71
244 1036,0	+54,328292	-13,604507	-3,778744	71	244 1071,0	-5,939547	+53,275037	+27,129265	71
244 1036,5	+55,580867	-7,129612	-0,320510	71	244 1071,5	-12,806740	+52,909686	+26,502986	71
244 1037,0	+55,926470	-0,535935	+3,143400	71	244 1072,0	-19,501478	+51,852761	+25,530036	71
244 1037,5	+55,358619	+6,067677	+6,555729	71	244 1072,5	-25,942379	+50,132358	+24,230242	71
244 1038,0	+53,889449	+12,572369	+9,860388	71	244 1073,0	-32,054533	+47,783150	+22,626407	71
244 1038,5	+51,549303	+18,872380	+13,004049	71	244 1073,5	-37,769718	+44,845429	+20,743832	71
244 1039,0	+48,385312	+24,867925	+15,937549	71	244 1074,0	-43,026482	+41,364297	+18,609868	71
244 1039,5	+44,459427	+30,467635	+18,617055	71	244 1074,5	-47,770080	+37,388908	+16,253528	71
244 1040,0	+39,845964	+35,590484	+21,004907	71	244 1075,0	-51,952447	+32,971898	+13,705196	71
244 1040,5	+34,628935	+40,167098	+23,070143	71	244 1075,5	-55,532090	+28,168856	+10,996353	71
244 1041,0	+28,899288	+44,140442	+24,788678	71	244 1076,0	-58,474034	+23,037893	+8,159369	71
244 1041,5	+22,752334	+47,466063	+26,143275	71	244 1076,5	-60,749724	+17,639269	+5,227292	71
244 1042,0	+16,285353	+50,111669	+27,123180	71	244 1077,0	-62,337111	+12,035064	+2,233695	71
244 1042,5	+9,595662	+52,056727	+27,723780	71	244 1077,5	-63,220549	+6,288850	-0,787509	71
244 1043,0	+2,778912	+53,291457	+27,945977	71	244 1078,0	-63,391031	+0,465390	-3,802227	71
244 1043,5	-4,072173	+53,816050	+27,795703	71	244 1078,5	-62,846192	-5,369712	-6,776374	71
244 1044,0	-10,868768	+53,639584	+27,283288	71	244 1079,0	-61,590451	-11,150364	-9,676066	71
244 1044,5	-17,526666	+52,779163	+26,422963	71	244 1079,5	-59,635215	-16,810412	-12,467863	71
244 1045,0	-23,966758	+51,258963	+25,232331	71	244 1080,0	-56,998990	-22,284095	-15,118991	71
244 1045,5	-30,115367	+49,109468	+23,731942	71	244 1080,5	-53,707529	-27,506598	-17,597663	71
244 1046,0	-35,904445	+46,366699	+21,944884	71	244 1081,0	-49,793854	-32,414607	-19,873355	71
244 1046,5	-41,271720	+43,071622	+19,896459	71	244 1081,5	-45,298370	-36,947005	-21,917165	71
244 1047,0	-46,160811	+39,269605	+17,613888	71	244 1082,0	-40,268721	-41,045545	-23,702162	71
244 1047,5	-50,521268	+35,009900	+15,126038	71	244 1082,5	-34,759713	-44,655628	-25,203788	71
244 1048,0	-54,308651	+30,345208	+12,463198	71	244 1083,0	-28,832970	-47,727049	-26,400199	71
244 1048,5	-57,484690	+25,331338	+9,656874	71	244 1083,5	-22,556604	-50,214825	-27,272698	71
244 1049,0	-60,017283	+20,026741	+6,739565	71	244 1084,0	-16,004678	-52,079943	-27,806059	71
244 1049,5	-61,880730	+14,492208	+3,744577	71	244 1084,5	-9,256568	-53,290167	-27,988924	71
244 1050,0	-63,055777	+8,790454	+0,705799	71	244 1085,0	-2,396209	-53,820756	-27,814098	71
244 1050,5	-63,529822	+2,985726	-2,342503	71	244 1085,5	+4,488829	-53,655097	-27,278839	71
244 1051,0	-63,297063	-2,856598	-5,365930	71	244 1086,0	+11,308321	-52,785314	-26,385080	71
244 1051,5	-62,358593	-8,670493	-8,330176	71	244 1086,5	+17,970512	-51,212756	-25,139632	71
244 1052,0	-60,722593	-14,389753	-11,201312	71	244 1087,0	+24,383334	-48,948449	-23,554311	71
244 1052,5	-58,404335	-19,948524	-13,946047	71	244 1087,5	+30,455667	-46,013272	-21,645959	71
244 1053,0	-55,426280	-25,281870	-16,532026	71	244 1088,0	+36,098767	-42,438225	-19,436471	71
244 1053,5	-51,818043	-30,326331	-18,928127	71	244 1088,5	+41,227688	-38,264387	-16,952691	71
244 1054,0	-47,616331	-35,020535	-21,104778	71	244 1089,0	+45,762772	-33,542737	-14,226212	71
244 1054,5	-42,864874	-39,305853	-23,034278	71	244 1089,5	+49,631213	-28,333871	-11,293122	71
244 1055,0	-37,614140	-43,126967	-24,691091	71	244 1090,0	+52,768620	-22,707427	-8,193609	71
244 1055,5	-31,921199	-46,432583	-26,052199	71	244 1090,5	+55,120474	-16,741302	-4,971453	71
244 1056,0	-25,849328	-49,176021	-27,097379	71	244 1091,0	+56,643688	-10,520662	-1,673412	71
244 1056,5	-19,467679	-51,315878	-27,809539	71	244 1091,5	+57,307938	-4,136636	+1,651539	71
244 1057,0	-12,850812	-52,816688	-28,175015	71	244 1092,0	+57,096707	+2,315255	+4,953093	71
244 1057,5	-6,078195	-53,649566	-28,183886	71	244 1092,5	+56,008271	+8,736881	+8,180588	71
244 1058,0	+0,766424	-53,792801	-27,830234	71	244 1093,0	+54,056129	+15,029525	+11,284087	71
244 1058,5	+7,595690	-53,232588	-27,112469	71	244 1093,5	+51,269137	+21,096042	+14,215500	71
244 1059,0	+14,319460	-51,963642	-26,033621	71	244 1094,0	+47,691047	+26,843052	+16,929673	71
244 1059,5	+20,845732	-49,989797	-24,601559	71	244 1094,5	+43,379714	+32,183141	+19,385480	71
244 1060,0	+27,081770	-47,324657	-22,829270	71	244 1095,0	+38,405624	+37,036811	+21,546722	71
244 1060,5	+32,935368	-43,992074	-20,735027	71	244 1095,5	+32,850186	+41,334261	+23,382933	71
244 1061,0	+38,316313	-40,026607	-18,342528	71	244 1096,0	+26,803520	+45,016698	+24,869901	71
244 1061,5	+43,138044	-35,473756	-15,680908	71	244 1096,5	+20,362207	+48,037345	+25,990040	71
244 1062,0	+47,319505	-30,390035	-12,784662	71	244 1097,0	+13,626809	+50,361861	+26,732441	71
244 1062,5	+50,787126	-24,842742	-9,693401	71	244 1097,5	+6,699526	+51,968383	+27,092732	71
244 1063,0	+53,476925	-18,909383	-6,451401	71	244 1098,0	-0,317964	+52,847237	+27,072783	71
244 1063,5	+55,336521	-12,676666	-3,106975	71	244 1098,5	-7,326460	+53,000151	+26,680183	71
244 1064,0	+56,327177	-6,239121	+0,288396	71	244 1099,0	-14,230822	+52,439391	+25,927666	71
244 1064,5	+56,425441	+0,302792	+3,681132	71	244 1099,5	-20,941262	+51,186684	+24,832497	71
244 1065,0	+55,624421	+6,844944	+7,016822	71	244 1100,0	-27,374271	+49,272018	+23,415760	71
244 1065,5	+53,934438	+13,282108	+10,241584	71	244 1100,5	-33,453246	+46,732537	+21,701777	71
244 1066,0	+51,383204	+19,510702	+13,303516	71	244 1101,0	-39,108866	+43,611371	+19,717460	71

J.D.	x	y	z	J.D.	x	y	z		
244 1101,5	-44,279271	+39,956715	+17,491823	71	244 1121,5	+46,685855	+29,239983	+18,250162	71
244 1102,0	-48,910076	+35,820884	+15,055507	71	244 1122,0	+42,171495	+34,332518	+20,540426	71
244 1102,5	-52,954260	+31,259530	+12,440363	71	244 1122,5	+37,032271	+38,924199	+22,529703	71
244 1103,0	-56,372030	+26,331016	+ 9,679165	71	244 1123,0	+31,347908	+42,951642	+24,191083	71
244 1103,5	-59,130615	+21,095842	+ 6,805296	71	244 1123,5	+25,205773	+46,361430	+25,503325	71
244 1104,0	-61,204129	+15,616221	+ 3,852557	71	244 1124,0	+18,699067	+49,110986	+26,451155	71
244 1104,5	-62,573417	+ 9,955695	+ 0,854975	71	244 1124,5	+11,924807	+51,168977	+27,025358	71
244 1105,0	-63,225923	+ 4,178811	- 2,153360	71	244 1125,0	+ 4,981922	+52,515559	+27,222748	71
244 1105,5	-63,155748	- 1,649150	- 5,138447	71	244 1125,5	- 2,030675	+53,142251	+27,045976	71
244 1106,0	-62,363504	- 7,462485	- 8,066511	71	244 1126,0	- 9,015862	+53,051500	+26,503184	71
244 1106,5	-60,856541	-13,195328	-10,904165	71	244 1126,5	-15,879882	+52,256038	+25,607555	71
244 1107,0	-58,648990	-18,782003	-13,618587	71	244 1127,0	-22,533700	+50,778067	+24,376807	71
244 1107,5	-55,761876	-24,157383	-16,177731	71	244 1127,5	-28,894093	+48,648270	+22,832609	71
244 1108,0	-52,223314	-29,257334	-18,550550	71	244 1128,0	-34,884476	+45,904754	+20,999964	71
244 1108,5	-48,068659	-34,019249	-20,707291	71	244 1128,5	-40,435473	+42,591999	+18,906644	71
244 1109,0	-43,340604	-38,382648	-22,619815	71	244 1129,0	-45,485294	+38,759840	+16,582646	71
244 1109,5	-38,089253	-42,289878	-24,261959	71	244 1129,5	-49,979880	+34,462485	+14,059650	71
244 1110,0	-32,372055	-45,686896	-25,609921	71	244 1130,0	-53,872944	+29,757626	+11,370588	71
244 1110,5	-26,253673	-48,524158	-26,642742	71	244 1130,5	-57,125814	+24,705651	+ 8,549232	71
244 1111,0	-19,805622	-50,757483	-27,342681	71	244 1131,0	-59,707347	+19,368999	+ 5,629878	71
244 1111,5	-13,105813	-52,349072	-27,695743	71	244 1131,5	-61,593632	+13,811567	+ 2,647048	71
244 1112,0	- 6,237812	-53,268375	-27,692053	71	244 1132,0	-62,767839	+ 8,098246	- 0,364720	71
244 1112,5	+ 0,710007	-53,493087	-27,326309	71	244 1132,5	-63,220062	+ 2,294539	- 3,371076	71
244 1113,0	+ 7,645609	-53,009879	-26,598094	71	244 1133,0	-62,947042	- 3,533801	- 6,338008	71
244 1113,5	+14,474544	-51,815188	-25,512166	71	244 1133,5	-61,952191	- 9,321027	- 9,232003	71
244 1114,0	+21,101426	-49,915667	-24,078613	71	244 1134,0	-60,245459	-15,001704	-12,020158	71
244 1114,5	+27,431486	-47,328610	-22,312948	71	244 1134,5	-57,843415	-20,510971	-14,670358	71
244 1115,0	+33,372248	-44,082033	-20,236026	71	244 1135,0	-54,769241	-25,784832	-17,151404	71
244 1115,5	+38,835173	-40,214552	-17,873881	71	244 1135,5	-51,052921	-30,760523	-19,433230	71
244 1116,0	+43,737387	-35,775095	-15,257451	71	244 1136,0	-46,731306	-35,376915	-21,487105	71
244 1116,5	+48,003211	-30,822244	-12,422126	71	244 1136,5	-41,848300	-39,575014	-23,285900	71
244 1117,0	+51,565758	-25,423530	- 9,407276	71	244 1137,0	-36,454987	-43,298576	-24,804431	71
244 1117,5	+54,368198	-19,654359	- 6,255613	71	244 1137,5	-30,609682	-46,494806	-26,019811	71
244 1118,0	+56,365055	-13,596881	- 3,012514	71					
244 1118,5	+57,523091	- 7,338613	+ 0,274744	71					
244 1119,0	+57,822157	- 0,970976	+ 3,557804	71					
244 1119,5	+57,255690	+ 5,412277	+ 6,788067	71					
244 1120,0	+55,830998	+11,716757	+ 9,917585	71					
244 1120,5	+53,569193	+17,849135	+12,899925	71					
244 1121,0	+50,504944	+23,718882	+15,691051	71					